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ABSTRACT

Gifted students from 24 rural high schools attended Saturday seminars at a state university. Scores on the Sequential Tests of Educational Progress indicated that many equally able students were not participating; questionnaires revealed that participants often held different college plans and social values. Over half of the nonparticipants gave work as a reason; over a fourth said they would attend if asked. According to guidance counselors, poor achievement was a frequent reason for nonparticipation; also, different selection criteria at the 24 schools apparently had a function. Followup of the participants showed 94% of the girls and 98% of the boys entered college; 96% completed the first semester; and 82% had grade averages above 2.00. (JD)

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Research Report

# SATURDAY SEMINARS
# at
# State University College of Education
# Oneonta, New York

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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# RESEARCH REPORT

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# FOREWORD

This report was written for two purposes: (1) to provide the participating schools with a summary of the information collected to date and with a meaningful condensation of the findings. (2) to satisfy the requirements of the Experimental Programs Bureau of the Division of Research of the State Education Department. In an attempt to satisfy both of these purposes there are some parts of the report that will undoubtedly fail to satisfy either audience.

A condition imposed on the report was that it be completed and that 10 copies be in Albany by August 1. Hence, in some respects the discussions of the meaning of the findings, the implications for other research, and even other statistical tests that would lead to further analysis and interpretation, were limited by the time element. However, the report does include a description of the procedure used, a summary of all of the data collected, and at least a partial analysis of all of the information in accordance with the previously outlined research design.

For the reader who wishes to get a quick, overall, picture of the findings included, it is recommended that he read only the introduction and the chapter summaries, which are found on the following pages: Chapter I, pages 1 - 2; Chapter II, page 20; Chapter III, pages 59 - 62; Chapter IV, pages 73 - 74; Chapter V, pages 79 - 80; Chapter VI, pages 96 - 97.

Reuben R. Rusch

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# CHAPTER I

# INTRODUCTION

The Saturday Seminars for able and ambitious students grew out of the interest and perseverance of area high school administrators in trying to meet the needs of students with high academic ability. Superior students in rural areas are frequently denied, by the nature of geographic remoteness, special enrichment and challenging experiences available in many urban and suburban environs. Staff and facility resources of rural school are smaller than those in urban schools. In an effort to overcome these disadvantages for the superior student, the area schools banded together to solve the problem. Because of their previous associations with the State University College of Education at Oneonta, it was only natural that the problem was shared jointly with certain college administrative officers and faculty. The planning that resulted led to the establishment, in the fall of 1958, of Saturday Seminars for able and ambitious students in mathematics and science. These seminars are held on the campus of State University College of Education at Oneonta and are taught by college instructors. In January, 1959, a third seminar was begun in humanities. Beginning in October, 1959, a fourth seminar was added in humanities and in February, 1960, a fifth seminar in social studies was added. The description of the content of these seminars and the student population has appeared in considerable detail in previous reports.

In April, 1960, a proposal was submitted to the State Education Department to investigate certain aspects of the program. In the proposal it was pointed out that there has been no report of an on-going experiment of this type, not has any evidence appeared in the literature on the results of this type of experiment . . . . an experiment where twenty four schools have utilized a center for higher education to enrich the academic program of gifted students. The investigation is further unique in that it probably represents the largest number of schools in New York State that have cooperatively joined to do research.

In September, approval was given to investigate the answers to two major questions: (1)" Are there other equally able students who do not attend the seminars and why don't they attend?" (2) "What happens to these seminar students, academically, when they leave high school and go on to college?"

This report is concerned with the process and results of answering these two questions.

## CHAPTER II

## IDENTIFICATION OF OTHER ABLE STUDENTS

The first question to be answered by the proposed research was "Are there other equally able students who do not attend the seminars and why don't they attend?" In an attempt to answer the first part of this question, Are there other equally able students who do not attend the seminars..., the STEP in Mathematics, Science, and Social Studies were administered in October and early November to all juniors and seniors in the 24 participating schools.* These were the same tests which were administered to selected students in June 1960, who expressed a desire to attend the seminars which were to begin in the fall of 1960, and continue through the academic year 1960-1961.** These tests formed the major basis for selecting students for the seminars.

The combined results for the twenty four schools are presented in Table I. According to Table I, the percentile, derived from the test norms, corresponding to the mean in mathematics for junior girls was 55, for junior boys, 68. Similarly the percentile derived from the test norms corresponding to the mean in mathematics for senior girls was 51, for senior boys, 76. Other parts of the table can be read similarly. The national normative data is not

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*The directions to school counselors comprise Appendix A. The results were returned to the schools for their use within two weeks of the testing date. See Appendix B.

**The Cooperative English Test, also given to selected students (in June 1960) who wished to attend the seminar, was not given to juniors and seniors of the participating schools. Administration of this test would have almost doubled the amount of testing time needed and was considered beyond the scope of the budget. Thus, there is no evidence to indicate how many juniors and seniors in participating schools are as able in this respect as are students attending the humanities seminar.

TABLE I MEAN RAW SCORE AND CORRESPONDING PERCENTILES OF ALL STUDENTS FROM THE 24 PARTICIPATING SCHOOLS ON THE STEP IN MATHEMATICS, SCIENCE AND SOCIAL STUDIES.

| Subject | Population | Mean Raw Score | Variance | Percentile |
|---|---|---|---|---|
| MATHEMATICS | Junior Girls | 21.82 | 54.06 | 55 |
| | Junior Boys | 26.08 | 57.60 | 68 |
| | Senior Girls | 23.26 | 61.16 | 51 |
| | Senior Boys | 29.21 | 75.69 | 76 |
| | All Juniors | 23.91 | 60.27 | 62 |
| | All Seniors | 26.04 | 76.69 | 61 |
| | All Boys | 27.45 | 67.82 | - |
| | All Girls | 22.48 | 57.76 | - |
| SCIENCE | Junior Girls | 29.02 | 49.24 | 58 |
| | Junior Boys | 33.97 | 66.34 | 78 |
| | Senior Girls | 32.30 | 53.48 | 69 |
| | Senior Boys | 36.45 | 66.19 | 85 |
| | All Juniors | 31.45 | 63.72 | 68 |
| | All Seniors | 33.10 | 69.18 | 74 |
| | All Boys | 35.05 | 67.69 | - |
| | All Girls | 29.54 | 51.45 | - |
| SOCIAL STUDIES | Junior Girls | 37.41 | 87.96 | 66 |
| | Junior Boys | 36.68 | 99.07 | 66 |
| | Senior Girls | 40.20 | 89.50 | 68 |
| | Senior Boys | 41.22 | 101.46 | 72 |
| | All Juniors | 37.05 | 93.43 | 66 |
| | All Seniors | 40.68 | 95.26 | 72 |
| | All Boys | 38.67 | 105.07 | - |
| | All Girls | 38.69 | 90.47 | - |

given separately for boys and girls - - a possible assumption being that there is no significant difference between the sexes. Norms are given separately, however, for juniors and seniors. Thus the percentiles corresponding to the mean for the twenty four schools given separately in the table for boys and girls are derived from the combination of boys' and girls' scores provided by the Educational Testing Service, publishers of the STEP.

The lowest score on the STEP of the seminar participants is given in Table II. That is, the lowest raw score of an mathematics seminar participant was 32, a score received by a senior boy. The lowest score of any senior girl who participated in the mathematics seminar received was 38. Other figures in the table can be interpreted similarly.

TABLE II. LOWEST SCORE ON THE STEP OF SEMINAR PARTICIPANTS.

| Seminar | Population | Raw Score | Converted Score | Percentile |
|---|---|---|---|---|
| Mathmetics | Junior Girls | 40 | 300 | 98 |
| | Junior Boys | 39 | 299 | 97 |
| | Senior Girls | 38 | 297 | 94 |
| | Senior Boys | 32 | 290 | 84 |
| Science | Junior Girls* | - | - | - |
| | Junior Boys | 44 | 307 | 97 |
| | Senior Girls | 40 | 300 | 93 |
| | Senior Boys | 37 | 295 | 85 |
| Social Studies | Junior Girls | 48 | 295 | 92 |
| | Junior Boys | 48 | 295 | 92 |
| | Senior Girls | 46 | 292 | 82 |
| | Senior Boys | 53 | 303 | 93 |

*There were no junior girls in the science seminar.

Percentiles for the converted scores indicated that no one in the mathematics seminar scored lower than the 84th percentile on the STEP in Mathematics. Similarly, no one in the science seminars scored below the 85th percentile in science and no one in the social studies seminar scored below the 82nd percentile in social studies.

The data for this table were obtained from the fall testing. The instructions to guidance counselors regarding the administration of the STEP comprise Appendix A. The directions were "Please administer the following three tests to all juniors and seniors in the high school who have not taken the test as part of their admittance to the Able and Ambitious seminar program." In almost all cases the test was again administered to seminar participants. As one counselor explained, "We didn't know what to do with them during that time, so we had them take the test again."

A few seminar participants were taking the test for the first time. Apparently they had been accepted without the test information.

The test-retest scores were usually very similar. One mathematics participant got all but two right the first time and all but one right the second time. The test probably did not measure the acheivement of certain, if not a majority, of the seminar participants.

In order to determine how many students in the 24 participating high schools, not in any seminars, scored as high as or higher than the lowest score of a seminar participant, the scores presented in Table II were used as the dividing line. An operational decision needed to be made as to whether the scores in spring or the scores in the fall testing would offer the best dividing line. The fall scores were used. However, there was relatively little difference in the spring and fall low seminar score. If the spring low score had been used, in most cases a few more students would have been added to the numbers presented in Tables III, IV, V, and VI.

As Kowitz and Armstrong (1960) have pointed out in dealing with over and under achievers, especially when group tests are used for individual identification purposes, a certain per cent of the population could be expected to score higher than a given score on the basis of chance. This may be the case for some of the high scoring non-seminar students. Similarly some of the students could also be in this group.

The data presented in Table III, V, and VII indicate the number of students, not in any seminar, who scored higher than the lowest person accepted for each specific seminar.

The data presented in Tables IV, VI, and VIII indicate the number of students, not in any seminar, who scored higher than the average score of those persons in the seminar.

The data presented in Tables III through VIII do not include those students who attended a seminar who scored higher in other areas than did some of the students in seminars in these other areas. In other words, the tables do not include, for example, the student who currently is attending the the mathematics seminar who also scored high in social studies and science. Nor do the tables include any other students enrolled in the seminar in 1960-61.

In some cases the same person (a student not enrolled in any seminar) scored high in all three of the achievement areas, in which case he would be included three or possibly six times in these tables: three times if he scored higher than the lowest score of any person in the three seminars; six times if he scored higher than the mean of those in the seminars. In other instances some students scored above the low or above the mean for the seminar students in only one area of acheivement. Hence, the tables should

TABLE III. NUMBER OF STUDENTS NOT IN ANY SEMINAR WHO SCORED HIGHER THAN THE LOWEST PERSON OF THE SAME SEX AND GRADE LEVEL IN THE SEMINAR

| | MATHEMATICS | | SOCIAL STUDIES | | SCIENCE | |
|---|---|---|---|---|---|---|
| | Girls | Boys | Girls | Boys | Girls | Boys |
| JUNIORS | 2<br>(300.0)* | 7<br>(299.0) | 37<br>(295.0) | 39<br>(295.0) | None in Sem. | 31<br>(307.0) |
| SENIORS | 7<br>(297.0) | 82<br>(290.0) | 62<br>(292.0) | 17<br>(303.0) | 23<br>(300.0) | 100<br>(295.0) |

*Numbers in parentheses represent converted score on STEP necessary for inclusion in that part of the table.

not be interpreted as the cumulative number of different students.

Table III shows the number of students not in any seminar who scored higher than the lowest person of the same sex and grade level in the seminar. Two junior girls and seven junior boys, for example, scored higher than the lowest student in the mathematics seminar, of comparable grade and sex. Similarly, 62 senior girls and 17 senior boys scored higher than the lowest student of comparable grade and sex in the social studies seminar.

TABLE IV. NUMBER OF STUDENTS NOT IN ANY SEMINAR WHO SCORED HIGHER THAN THE MEAN OF THE SEMINAR STUDENTS OF THE SAME SEX AND GRADE LEVEL

| | MATHEMATICS | | SOCIAL STUDIES | | SCIENCE | |
|---|---|---|---|---|---|---|
| | Girls | Boys | Girls | Boys | Girls | Boys |
| JUNIORS | 0<br>(307.0)* | 4<br>(300.5) | 7<br>(305.8) | 11<br>(304.3) | None in Sem. | 4<br>(317.4) |
| SENIORS | 0<br>(304.2) | 1<br>(308.6) | 25<br>(302.8) | 14<br>(304.7) | 6<br>(307.5) | 4<br>(319.6) |

* Numbers in parentheses represent converted score on STEP necessary for inclusion in that part of the table.

Table IV shows the number of students, not in any seminar, who scored higher than the mean of those students in the seminar of the same sex and grade level. Seven junior girls, not in any seminar, for example, scored higher than the mean score of those junior girls currently in the social studies seminar. Similarly, 6 senior girls, not in any seminar, scored higher than the mean score of those senior girls currently in the science seminar. There are no junior girls in the science seminar; thus there is no basis for identifying junior girls for this part of Table IV.

Tables V, VI, VII, and VIII show the data for juniors and seniors, disregarding sex. Since there are not separate norms for the sexes, these are the students who constitute the group of equally able students who do not attend the seminars. In other words, these students, who are not attending any seminar, scored higher than the lowest person in a seminar.

TABLE V. NUMBER OF STUDENTS NOT IN ANY SEMINAR WHO SCORED HIGHER THAN THE LOWEST PERSON IN THE SEMINAR REGARDLESS OF SEX

| | MATHEMATICS Girls and Boys | SOCIAL STUDIES Girls and Boys | SCIENCE Girls and Boys |
|---|---|---|---|
| JUNIORS | 9<br>(299.0)* | 76<br>(295.0) | 34<br>(307.0) |
| SENIORS | 114<br>(290.0) | 128<br>(292.0) | 150<br>(295.0) |

*Numbers in parentheses represent score of STEP necessary for inclusion in that part of the table.

Table V shows the number of students, not in any seminar, who scored higher than the lowest person in the seminar. For example, nine juniors and 114 seniors, not in any seminar, scored higher in mathematics than the lowest person in the mathematics seminar.

TABLE VI. NUMBER OF STUDENTS NOT IN ANY SEMINAR WHO SCORED HIGHER THAN THE MEAN OF THE SEMINAR STUDENTS REGARDLESS OF SEX

| | MATHEMATICS Girls and Boys | SOCIAL STUDIES Girls and Boys | SCIENCE Girls and Boys |
|---|---|---|---|
| JUNIORS | 2<br>(304.4)* | 19<br>(304.9) | 4<br>(317.4) |
| SENIORS | 3<br>(306.9) | 38<br>(303.3) | 10<br>(317.9) |

* Numbers in parentheses represent converted score on STEP necessary for inclusion in that part of the table.

Table VI shows the number of persons, not in any seminar, who scored higher than the mean of the seminar students. For example, 2 juniors and 3 seniors, not in any seminar, scored higher than the mean of the mathematics seminar students of similar grade level.

In Tables VII and VIII, the data have been further combined. These data are not the exact combination of the data presented in Tables V and VI, because a different criterion score is used. For example, Table V indicates that the 76 junior girls and boys scored higher in social studies than the lowest junior in the social studies seminar. The lowest converted score for any junior in the social studies seminar was 295. In social studies, one hundred and twenty-eight senior boys and girls scored higher than the lowest senior in the seminar. The lowest converted score for any senior in the social studies seminar was 292. Table VII includes the number, not in any seminar, who scored higher than the lowest person in the seminar, regardless of sex or grade level. Therefore, all students who were in Table V are included in Table VII. In addition, the number in Table VII includes those juniors who scored above 292 and below 295, since the criterion score for inclusion in Table VII is 292. The lowest score received by anyone in the social studies seminar was 292, obtained by a senior. The data in Table VI have been similarly combined in Table VIII. However, the data in Tables V and VII are concerned with juniors and seniors who scored higher than the lowest person in the seminar. The data in Tables VI and VIII are concerned with the number of juniors and seniors who scored higher than the mean of the seminar students.

TABLE VII. NUMBER OF STUDENTS NOT IN ANY SEMINAR WHO SCORED HIGHER THAN THE LOWEST PERSON IN THE SEMINAR REGARDLESS OF SEX OR GRADE LEVEL

| | MATHEMATICS<br>Girls and Boys | SOCIAL STUDIES<br>Girls and Boys | SCIENCE<br>Girls and Boys |
|---|---|---|---|
| JUNIORS AND SENIORS | 200<br>(290.0)* | 234<br>(292.0) | 279<br>(295.0) |

* Numbers in parentheses represent converted score on STEP necessary for inclusion in that part of the table.

TABLE VIII. NUMBER OF STUDENTS NOT IN ANY SEMINAR WHO SCORED HIGHER THAN THE MEAN OF THE SEMINAR STUDENTS REGARDLESS OF SEX OR GRADE LEVEL

| | MATHEMATICS<br>Girls and Boys | SOCIAL STUDIES<br>Girls and Boys | SCIENCE<br>Girls and Boys |
|---|---|---|---|
| JUNIORS AND SENIORS | 4<br>(306.2)* | 47<br>(304.0) | 14<br>(317.7) |

* Numbers in parentheses represent converted score on STEP necessary for inclusion in that part of the table

The data in Table IX indicate the number of students who scored as high as or higher than the lowest person in the seminar. Previous tables have included students who scored higher than the lowest person in the seminar or students who score higher than the mean of the seminar students. Table IX indicates the number of students who scored as high as or higher than the mean of the seminar students. Table VIII indicates, then, that 238 juniors and seniors in the twenty-four participating schools scored as high as or higher than the lowest score of a person in the mathematics seminar. Similarly, Table IX indicates that 14 juniors and seniors, not attending any seminar, scored as high as or higher than the mean score of seminar students in science. Other figures in these tables can be interrupted similarly.

TABLE IX. NUMBER OF STUDENTS NOT IN ANY SEMINAR WHO SCORED AS HIGH AS OR HIGHER THAN THE LOWEST PERSON IN THE SEMINAR REGARDLESS OF SEX OR GRADE LEVEL.

| | MATHEMATICS<br>Girls and Boys | SOCIAL STUDIES<br>Girls and Boys | SCIENCE<br>Girls and Boys |
|---|---|---|---|
| JUNIORS AND SENIORS | 238<br>(290.0)* | 269<br>(292.0) | 315<br>(295.0) |

* Numbers in parentheses represent converted score on STEP necessary for inclusion in that part of the table

TABLE X. NUMBER OF STUDENTS NOT IN ANY SEMINAR WHO SCORED AS HIGH AS OR HIGHER THAN THE MEAN OF THE SEMINAR STUDENTS REGARDLESS OF SEX OR GRADE LEVEL

| | MATHEMATICS<br>Girls and Boys | SOCIAL STUDIES<br>Girls and Boys | SCIENCE<br>Girls and Boys |
|---|---|---|---|
| JUNIORS AND SENIORS | 4<br>(306.2)* | 65<br>(304.0) | 14<br>(317.7) |

* Numbers in parentheses represent converted score on STEP necessary for inclusion in that part of the table

The students represented by the numbers in Table IX constitute the population that scored as high as or higher than the lowest person in the seminar. The numbers cannot be read cumulatively, as was explained previously, since some students scored higher than the lowest person in all three areas. This population is explained further in Table XI.

Table XI is a breakdown of the high scoring non-seminar population. Sixty-four seniors and 40 juniors , not attending any seminar, scored higher than the lowest score of a seminar participant in science, mathematics, and social studies. Of the juniors and seniors not attending the seminars, 163 scored higher than the lowest score of anyone in a mathematics or science seminar. Similarly, 77 juniors and 89 seniors, not attending any seminar, scored higher than the lowest score of anyone in a science and social studies seminar. In the twenty-four participating schools, 463 different students scored higher than the lowest score of one of the seminar participants. Thus, as measured by the STEP, in mathematics, science, and social studies, there are 463 able students in these high schools who do not attend the seminars.

Some trends, not directly related to the hypotheses to be investigated, in this design, but none the less extremely interesting, can be noticed in Table I. In every case, except for juniors in social studies, boys scored higher than girls. That is, in mathematics and science, the mean for junior and senior boys is higher than the corresponding means for junior and senior girls. The means for the sexes in social studies is relatively similar within each grade.

TABLE XI. HIGH SCORING NON-SEMINAR POPULATION

| POPULATION | NUMBER | | |
|---|---|---|---|
| | Sr. | Jr. | Total |
| Number of High Scoring Non-Seminar Pariticipants who scored higher than the Lowest Person in all three seminars (science, mathematics, social studies). | 64 | 40 | 104 |
| Number of High Scoring Non-Seminar Participants who scored higher than the Lowest Person in science and mathematics. | 92 | 71 | 163 |
| Number of High Scoring Non-Seminar Participants who scored higher than the Lowest Person in science and social studies. | 89 | 77 | 166 |
| Number of High Scoring Non-Seminar Pariticipants who scored higher than the Lowest Person in mathematics and social studies. | 81 | 54 | 135 |
| Number of High Scoring Non-Seminar Participants who scored higher than the Lowest Person in mathematics only. | 131 | 110 | 241 |
| Number of High Scoring Non-Seminar Participants who scored higher than the Lowest Person in science only. | 157 | 160 | 317 |
| Number of High Scoring Non-Seminar Participants who scored higher than the Lowest Person in social studies only. | 150 | 120 | 270 |
| Total Number of Different Students who scored higher than the Lowest Person in any seminar. | 233 | 230 | 463 |

Previous to running tests of the significance of the difference between the means an analysis was made of the homogeneity of variance between the twenty-four participating schools. The results of Bartlett's test of homogeneity of variance for all students combined is presented in Table XII.

TABLE XII. BARTLETT'S TEST OF HOMOGENEITY OF VARIANCE (ALL STUDENTS)

| SUBJECT | B. | PROBABILITY |
|---|---|---|
| MATHEMATICS | 21.264 | .50 |
| SCIENCE | 29.580 | .25 |
| SOCIAL STUDIES | 40.476 | .02 |

The data in Table XII indicate that we can accept the hypothesis that there is no difference in the variances among the 24 schools in mathematics and science. However, there is a difference among the variances of the 24 schools in social studies.

Further tests of homogeneity of variance between the twenty-four participating schools, according to sub-groups, is presented in Table XIII.

TABLE XIII. BARTLETT'S TEST OF HOMOGENEITY OF VARIANCE

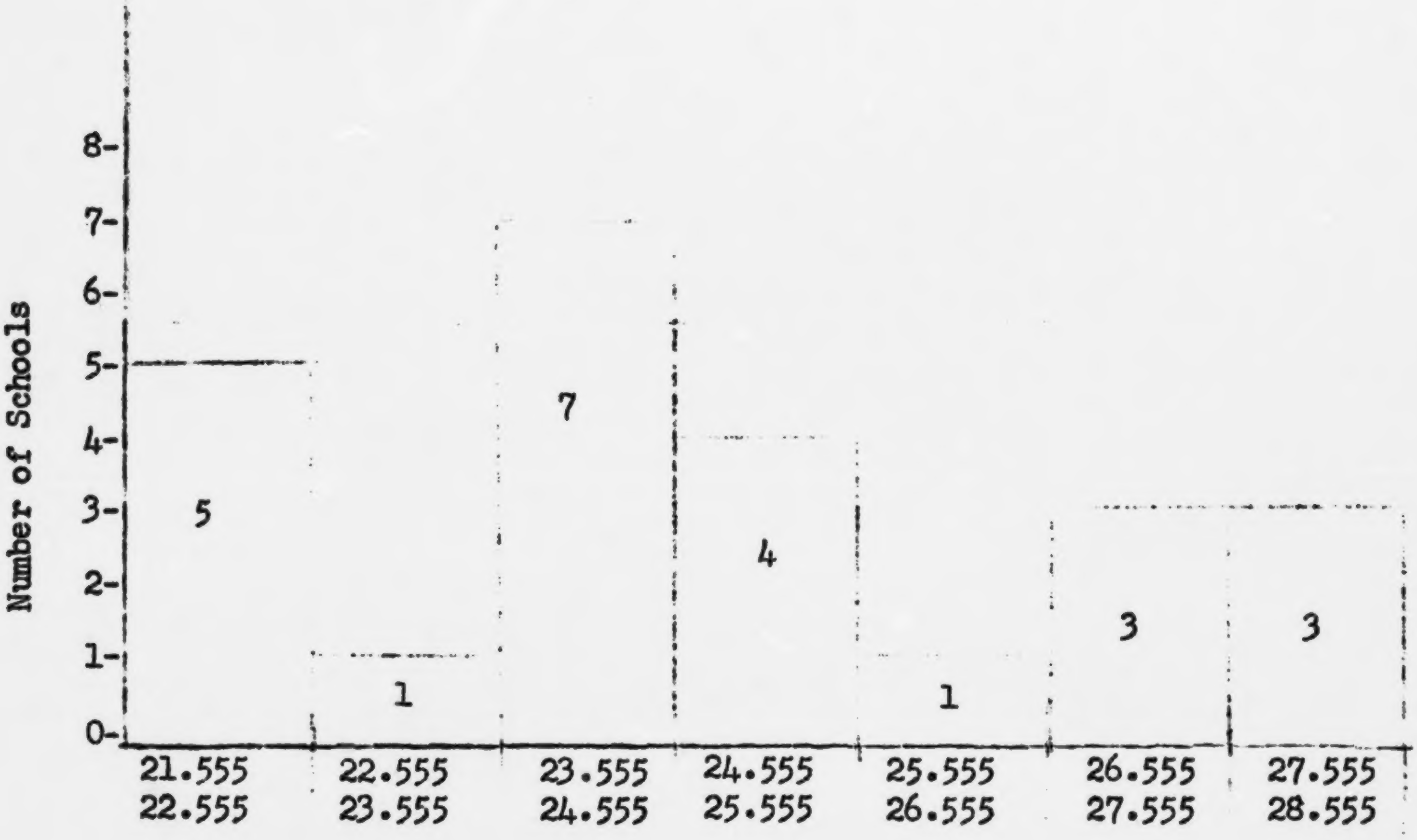
| SUBJECT | POPULATION | B | PROBABILIT |
|---|---|---|---|
| MATHEMATICS | Junior Girls | 28.08 | .75 |
| | Junior Boys | 18.16 | .25 |
| | Senior Girls | 19.35 | .25 |
| | Senior Boys | 36.86 | .95 |
| SCIENCE | Junior Girls | 18.00 | .25 |
| | Junior Boys | 18.02 | .25 |
| | Senior Girls | 22.41 | .50 |
| | Senior Boys | 34.23 | .95 |
| SOCIAL STUDIES | Junior Girls | 17.99 | .25 |
| | Junior Boys | 16.45 | .15 |
| | Senior Girls | 27.98 | .75 |
| | Senior Boys | 23.07 | .50 |

The data in Table XIII indicate that we can accept the hypothesis that there is no difference in variance among the 24 participating schools in the population sub-grojps in all instances but two: For senior boys in mathematics and science there is a difference among the twenty-four schools in the variances.

Grouped frequency distributions of the means of the 24 school in mathematics, science, and social studies comprise Figures I, II, and III. Although the means do not appear to be distributed normally, tests of significance of the difference between the means of the sub parts of the population were determined and are presented in Table XIV.

TABLE XIV. TESTS OF THE SIGNIFICANCE OF THE DIFFERENCE BETWEEN THE MEANS

| SUBJECT | POPULATION | z | SIGN LEVEL |
|---|---|---|---|
| MATHEMATICS | Junior Girls - Junior Boys | 7.93 | .01 |
| | Senior Girls - Senior Boys | 9.00 | .01 |
| | All Juniors - All Seniors | 4.78 | .01 |
| | All Girls - All Boys | 11.75 | .01 |
| SCIENCE | Junior Girls - Junior Boys | 9.10 | .01 |
| | Senior Girls - Senior Boys | 6.73 | .01 |
| | All Juniors - All Seniors | 3.78 | .01 |
| | All Girls - All Boys | 13.41 | .01 |



Means (Raw Score) Mathematics

FIGURE I

DISTRIBUTION OF MEANS, ALL JUNIORS AND SENIORS
IN THE 24 PARTICIPATING SCHOOLS.

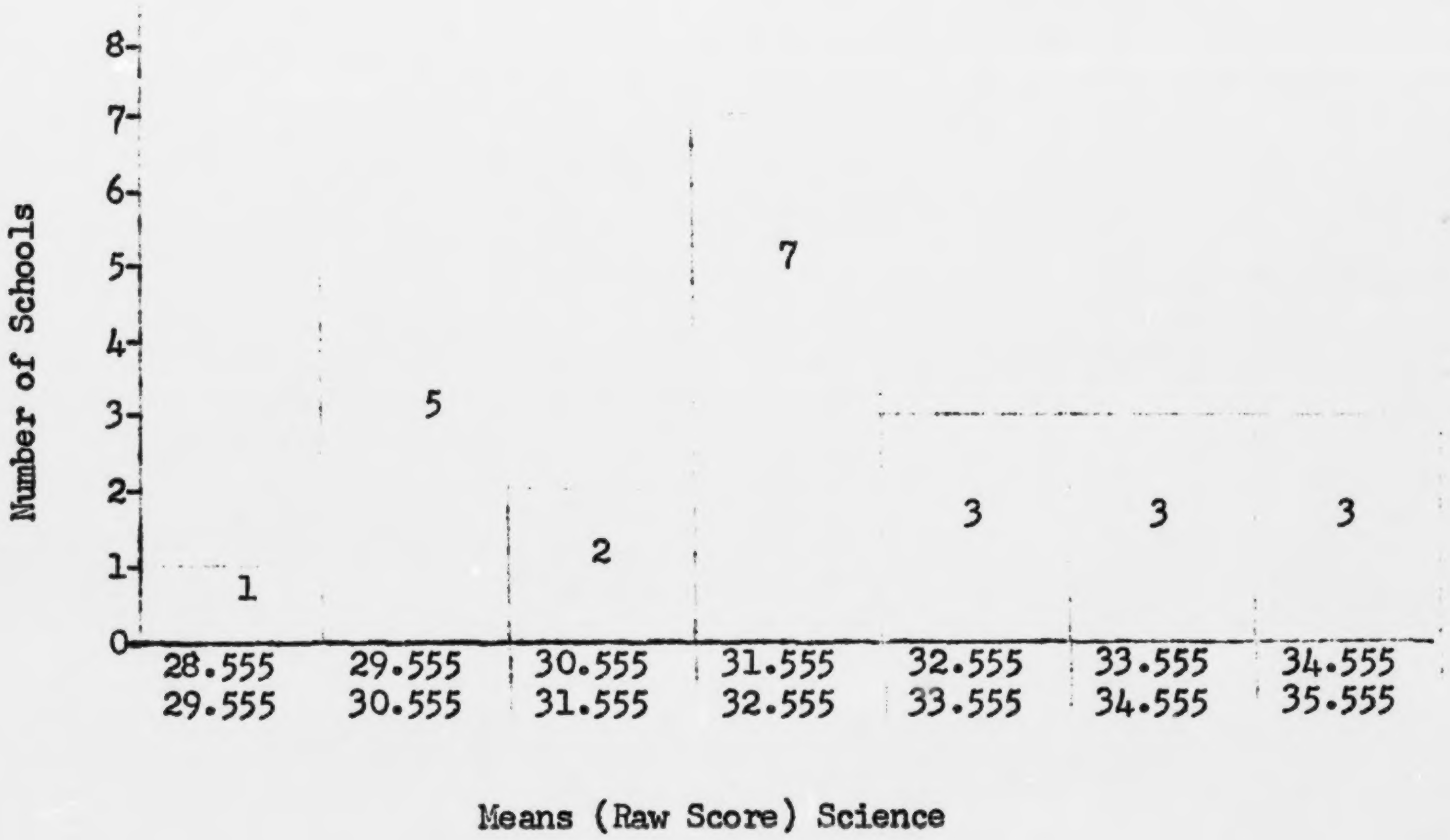


FIGURE 2

DISTRIBUTION OF MEANS, ALL JUNIORS AND SENIORS IN THE 24 PARTICIPATING SCHOOLS.

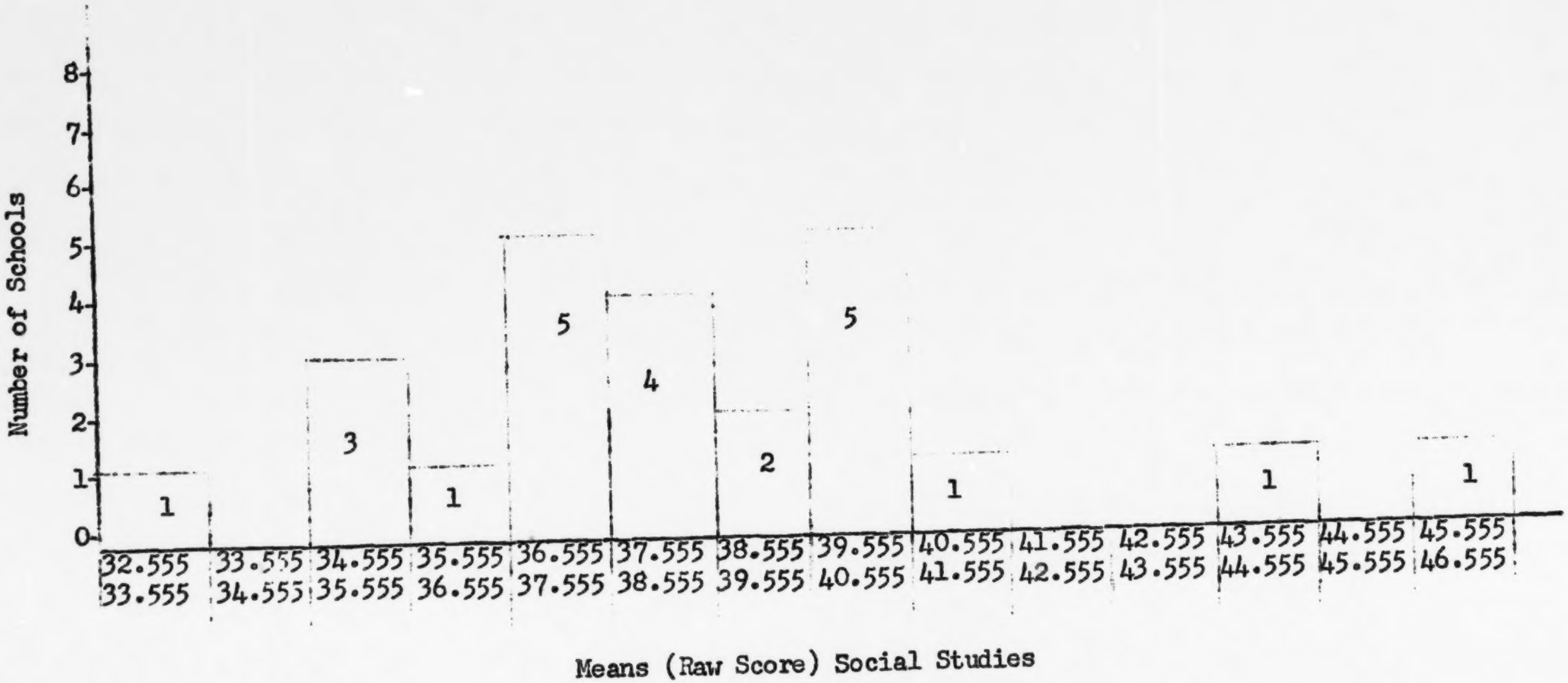


FIGURE 3

DISTRIBUTION OF MEANS, ALL JUNIORS AND SENIORS IN THE 24 PARTICIPATING SCHOOLS.

The difference in means between junior girls and junior boys and between senior girls and senior boys in mathematics and science is significant at better than the .01 level of confidence.

## SUMMARY AND CONCLUSION

The first question to be answered was "Are there other equally able students who do not attend the seminars and why don't they attend?" In an attempt to answer the first part of this question, "Are there other equally able students who do not attend the seminars...," the Sequential Tests of Educational Progress in mathematics, science, and social studies were administered in October and early November to all juniors and seniors in the 24 participating schools. These were the same tests which were administered to selected students in June of 1960, who expressed a desire to attend the seminars which were to begin in the fall of 1960, and continue through the academic year 1960-61. These tests formed the major basis for selecting students for the seminars.

The results of the administration of the STEP showed that:

(1) One hundred and four students not participating in any seminar scored higher than the lowest score of any seminar participant in all three seminars.

(2) Many students not participating in any seminar scored even higher than the mean of the seminar participants.

(3) Four hundred and sixty-three different students not participating in any seminar from the 24 participating schools scored higher than the lowest score obtained by a student participating in one of the three seminars; mathematics, science, and social studies.

As measured by the STEP in mathematics, science, and social studies, there are 463 able students in these high schools who do not attend the seminars.

Incidental to the hypothesis tested, were the interesting findings that in science and mathematics, junior boys scored significantly higher than junior girls, and senior boys scored significantly higher than senior girls.

## CHAPTER III

## ADOLESCENT VALUES

The results of the administration of the STEP in science, social studies, and mathematics indicated that there were many students in these high schools not attending the seminars who did score as high as or higher than some students admitted to the seminars. Following Coleman, (1959) it was hypothesized that the reasons these students did not attend the seminars could be found in part, by an analysis of adolescent values. In an attempt to assess these values a somewhat non-directive questionnaire was designed for all junior and senior girls and a similar questionnaire was designed for all junior and senior boys. See appendices C and D. The questionnaires were administered by the guidance counselors. See Appendix E.

Since it was hypothesized that those high-scoring students not attending any seminar would have values different from seminar students, these two groups provide the basis for the organization of the analysis of the data. The third group is all other students. In other words, the data are analyzed in terms of responses of seminar students, responses of those scoring as high as or higher than the lowest person in the seminar, and responses of other juniors and seniors. Since separate though similar questionnaires were given to boys and girls, the organization of the analysis of data is further structured according to the responses of each sex.

Table XV shows the responses of students to the question, "Do you plan to go to college?" Almost ninety-seven per cent of all seminar girls and all of the seminar boys replied that they plan to go to college. Approximately eighty-two per cent of the high-scoring girls not attending a seminar and approximately seventy-seven per cent of the high-scoring boys not attending a seminar said that they plan to go to college. Among all juniors and seniors in the twenty-four schools 64.9 per cent of the girls and 58.9 per cent of the boys said that they plan to go to college.

TABLE XV. PLANS FOR COLLEGE

| Population | Number and Per Cent Responding | | | |
|---|---|---|---|---|
| | yes | | no | |
| | No. | % | No. | % |
| Seminar Students Girls (65) | 63 | 96.9 | 2 | 3.0 |
| Boys (47) | 47 | 100.0 | - | - |
| Total Boys and Girls (112) | 110 | 98.2 | 2 | 1.7 |
| Those scoring as high as or higher than the lowest person in the seminar Girls (137) | 113 | 82.4 | 24 | 17.5 |
| Boys (237) | 183 | 77.2 | 54 | 22.7 |
| Total Boys and Girls (374) | 296 | 79.1 | 78 | 20.8 |
| All other juniors and seniors Girls (508) | 285 | 56.1 | 223 | 43.9 |
| Boys (357) | 148 | 41.5 | 209 | 58.5 |
| Total Boys and Girls (865) | 433 | 50.0 | 432 | 50.0 |
| All juniors and seniors combined Girls (710) | 461 | 64.9 | 249 | 35.0 |
| Boys (641) | 378 | 58.9 | 263 | 41.0 |
| Total Boys and Girls (1351) | 839 | 62.1 | 512 | 37.8 |

All but two of the seminar girls indicated that they plan to go on to college. All seminar boys plan to attend college.

A significantly (.01 level) greater per cent of the seminar students (boys and girls combined) indicate that they plan to go to college than the per cent so indicating in the other two groups. Similarly, significantly more seminar girls than high-scoring non-seminar girls or than all other girls, indicated that they plan to go to college, and significantly more seminar boys than high-scoring non-seminar boys or than all other boys, indicated that they plan to go on to college. These tests of significance comprise Appendix Q.

Of all juniors and seniors from these 24 participating schools 62.1 per cent plan to go on to college.

The responses of the girls to the statement "Name the most popular boy in your high school are presented in Table XVI.

TABLE XVI. MOST POPULAR BOY IN HIGH SCHOOL (GIRLS' OPINIONS)

| Population | | Number and Per Cent | | | | | |
|---|---|---|---|---|---|---|---|
| | | Seminar Students | | High-Scoring Non-Seminar Students | | Other Students | |
| | | No. | % | No. | % | No. | % |
| Seminar Students | (62) | 13 | 20.9 | 33 | 53.2 | 16 | 25.8 |
| Those scoring as high as or higher than those in the seminar | (137) | 23 | 16.7 | 75 | 54.7 | 39 | 28.4 |
| All other junior and senior girls | (425) | 54 | 12.7 | 199 | 46.8 | 172 | 40.4 |
| All junior and senior girls combined | (624) | 90 | 14.4 | 307 | 49.1 | 227 | 36.3 |

Table XVI shows that 20.9 per cent of the girls attending a seminar chose a boy attending a seminar as the most popular boy in school. Similarly among the "all other girls" group only 12.7 per cent of them chose a boy attending the seminar as most popular. The difference between these two per cents is significant at better than the .05 level of confidence, but not significant at the .01 level. There is no significant difference between 20.9 per cent and 16.7 per cent and between 16.7 per cent and 12.7 per cent. These tests of significance and the others immediately following that pertain to table XVI, comprise Appendix G.

The three groups of girls did not differ significantly in the frequency with which they chose high-scoring students not attending the seminar as most popular boy in high school. That is, there is no significant difference (.01 or .05 level) between 53.2, 54.7 and between 53.2 and 46.8 per cents.

The "all other students" group of girls chose the most popular boy from the "all other students" group of boys more frequently than did the other two groups chose the most popular boy from the "all other students" group. The difference between 40.4 per cent and 28.4 per cent is significant at the .01 level. The difference between 40.4 per cent and 25.8 per cent is significant at the .05 level.

Applying the chi square test to the data in table XVI results in a chi square of 20.79. This is significant at better than the .01 level of confidence, indicating that the three groups of girls do not tend to choose the most popular boy from among the same groups. These data are presented in Appendix H.

The responses of the boys to the statement "Name the most popular boy in your high school" are found in Table XVII.

TABLE XVII. MOST POPULAR BOY IN HIGH SCHOOL (BOYS' OPINIONS)

| Population | | Number and Per Cent | | | | | |
|---|---|---|---|---|---|---|---|
| | | Seminar Students | | High-Scoring Non-Seminar Students | | Other Students | |
| | | No. | % | No. | % | No. | % |
| Seminar Students | (46) | 4 | 8.6 | 33 | 71.7 | 9 | 19.5 |
| Those scoring as high as or higher than those in the seminar | (248) | 38 | 15.3 | 139 | 56.0 | 71 | 28.6 |
| All other junior and senior boys | (277) | 46 | 16.6 | 116 | 41.8 | 115 | 41.5 |
| All junior and senior boys combined | (571) | 88 | 15.4 | 288 | 50.4 | 195 | 34.1 |

Table XVII shows that 8.6 per cent of the seminar boys chose a seminar boy as most popular boy in high school while 15.3 per cent of the high-scoring boys not attending the seminar chose a seminar boy as most popular and 16.6 per cent of the "all other students" group chose a seminar boy as most popular. The differences between these per cents (8.6 and 15.3, and 8.6 and 16.6) are not significant (.01 or .05 level). These tests of significance and those immediately following pertaining to Table XVII can be found in Appendix I.

Approximately 72 per cent of the seminar boys chose a high-scoring non-seminar student as most popular boy in high school. Only 56 per cent of the high-scoring non-seminar group chose a boy from among their own group as most popular. This difference between 72 and

56 per cent is at the .05 level. The difference between seminar boys and all other boys in choosing the high scoring boys the most popular boy is also significant (.01 level).

Of the "all other students" group of boys forty-one and eight-tenths per cent chose a high-scoring non- seminar student as most popular boy in high school. The difference between 41.8 per cent and 56.0 per cent is significant at the .01 level of confidence.

The "all other students" group chose a boy from their own group 41.5 per cent of the time. The seminar boys chose a boy from the "all other students" group 19.5 per cent of the time, while the high-scoring non-seminar boys chose the most popular boy from this group 28.6 per cent of the time. The differences between 41.5 and 28.6 per cents and 41.5 and 19.5 per cents are significant at the .01 level of confidence. There is no significant difference (.05 or .01 level) between 19.5 and 28.6 per cent.

The data in Table XVII and the tests of significance indicate that seminar boys tend to choose the most popular boy from among the high-scoring non-seminar boys. The "all other" group of boys choose the most popular boy from among their own group more frequently than seminar students and high-scoring non-seminar students choose the most popular boy from among the "all other students" group.

The chi square statistic applied to the data presented in Table XVII results in a chi square of 11.26 which is significant at better than the .05 level of confidence. Thus, boys from the three groups choose the most popular boy from among the three groups in a different proportion. This data is presented in Appendix J.

The responses of the boys to the statement "Name the most popular girl in your high school" are presented in Table XVIII.

TABLE XVIII. MOST POPULAR GIRL IN HIGH SCHOOL (BOYS' OPINIONS)

| Population | Number and Per Cent | | | | | |
|---|---|---|---|---|---|---|
| | Seminar Students | | High-Scoring Non-Seminar Students | | Other Students | |
| | No. | % | No. | % | No. | % |
| Seminar Students (42) | 6 | 14.2 | 14 | 33.3 | 22 | 52.3 |
| Those scoring as (222) high as or higher than those in the seminar | 34 | 15.3 | 86 | 38.7 | 102 | 45.9 |
| All other junior (280) and senior boys | 44 | 15.7 | 74 | 26.4 | 162 | 57.8 |
| All junior and senior boys combined (544) | 84 | 15.4 | 174 | 31.9 | 286 | 52.5 |

Table XVIII shows that 14.2 per cent of the seminar boys chose a seminar girl as most popular girl in high school. There is no significant difference (.05 level) in the frequency with which the three groups chose seminar girls. Similarly, there is no significant difference between the three groups in how frequently they chose a high-scoring non-seminar girl as most popular girl in high school. However, a significantly higher per cent of the "all other boy" chose girls from the "all other students" group than did the high-scoring non-seminar boys choose the most popular girl from the "all other students" group. The difference between 58 per cent and 46 per cent is significant at the .01 level of confidence. There is no significant difference between the seminar group and the high-scoring non-seminar group in their frequency of choice from the "all other students" group. These statistics are presented in Appendix K.

The chi square statistic applied to the data presented in Table IV results in a chi square of 9.31. With four degrees of freedom this is significant at the .06 level of confidence. Hence, using the usual level used in the social sciences the null hypotheses must be accepted on the basis of this statistic. That is, the frequency of choice is independent of the three groups. These statistics are found in Appendix L.

The responses of the girls to the statement "Name the most popular girl in your high school" are found in Table XIX.

TABLE XIX. MOST POPULAR GIRL IN HIGH SCHOOL (GIRLS' OPINIONS)

| Population | Number and Per Cent | | | | | |
|---|---|---|---|---|---|---|
| | Seminar Students | | High-Scoring Non-Seminar Students | | Other Students | |
| | No. | % | No. | % | No. | % |
| Seminar Students (59) | 12 | 20.3 | 12 | 20.3 | 35 | 59.3 |
| Those scoring as high as or higher than those in the seminar (136) | 11 | 8.0 | 51 | 37.5 | 74 | 54.4 |
| All other junior and senior girls (439) | 71 | 16.1 | 132 | 30.0 | 236 | 53.7 |
| All junior and senior girls combined (634) | 94 | 14.8 | 195 | 30.7 | 345 | 54.4 |

Table XIX shows that seminar girls picked seminar girls as most popular 20.3 per cent of the time, while high-scoring non-seminar girls picked seminar girls only 8.0 per cent of the time, and the "all other students" girls picked seminar girls as most popular 16.1

per cent of the time. The difference between 20 and 8 per cent is significant at the .05 level of confidence. The difference between 20 and 16 per cent is not significant (.05 level).

The difference between the choices of high-scoring non-seminar girls and all other girls ( 8 per cent and 16 per cent) is significant at the .01 level of confidence. These tests of significance and others concerning the data presented in Table V are presented in Appendix M.

Table V further shows that 37.5 per cent of the high-scoring non-seminar girls chose the most popular girl in high school from their own group. Only 20.3 per cent of the seminar girls and 30.0 per cent of all other girls chose the most popular girl in school from the high-scoring non-seminar student group. The difference between 38 per cent and 20 per cent is significant at the .01 level of confidence. The difference between 20 per cent and 30 per cent and between 30 per cent and 38 per cent is not significant (.05 level).

There is no significant difference between the three groups in their frequency of choosing the most popular girl in high school from the "all other students" group.

The chi square statistic applied to the data presented in Table XIX resulted in a chi square of 10.38. This is significant at better than the .05 level of confidence. Hence the null hypothesis must be rejected. That is, the frequency of choice is not independent of the three groups. This data is presented in Appendix N.

A comparison of the responses in Tables XVI, XVII, XVIII and XIX shows some interesting contrasts. Approximately 21 per cent of the seminar girls named a seminar boy as most popular boy in high school, while only about nine per cent of the seminar boys named a seminar boy as most popular boy in high school. When seminar boys were asked to name the most popular girl in high school approximately 14 per cent of them named a seminar girl. However, 20.3 per cent of the seminar girls named a seminar girl as the most popular girl in high school. Perhaps there is some difference in what girls and boys are perceived as most popular among seminar girls and boys, possibly implying that different criteria may be used by seminar boys and girls in determining popularity.

Another interesting contrast which leads to many interesting hypotheses is the selection of the most popular girl and boy in high school by high-scoring seminar students. Only eight per cwmt of the choices of the most popular girl in high school by high-scoring girls were for seminar girls. High-scoring non-seminar boys choose seminar girls or most popular girl in high school 15.3 per cent of the time. High-scoring non-seminar boys choose a seminar boy as most popular boy in school 15.3 per cent of the time. Similarly they choose a seminar girl as most popular girl in high school 16.7 per cent of the time.

Table XX shows how high school girls responded to the question,

> "If you had your choice, how would you most like to be remembered in school? (Number in order of preference 1 for first choice, 2 for second choice, 3 for third choice.)
>
> _____ as most popular
> _____ as a leader in extra-curricular activities
> _____ as a brilliant student"

TABLE XX. HOW HIGH SCHOOL GIRLS WOULD MOST LIKE TO BE REMEMBERED (FIRST CHOICES)

| Population | Number and Per Cent of First Choices | | | | | |
|---|---|---|---|---|---|---|
| | Most Popular | | Leader in Extra-Curricular Activities | | Brilliant Student | |
| | No. | % | No. | % | No. | % |
| Seminar Students (66) | 23 | 34.8 | 13 | 19.6 | 30 | 45.4 |
| Those scoring as high or higher than those in the seminar (136) | 39 | 28.6 | 31 | 22.7 | 66 | 48.5 |
| All Other Girls (723) | 196 | 27.1 | 222 | 30.7 | 305 | 42 .1 |
| Total Girls (925) | 258 | 27.8 | 266 | 28.7 | 401 | 43.3 |

There is no significant difference (.05 or .01 level) between the per cents of the three groups responding "most popular" and "brilliant student" as their first choice. However, a significantly (.05) larger percentage of the "all other girls" than of seminar girls would most like to be remembered as a leader in extra-curricular activities. Similarly, a significantly (.05) larger percentage of "all other girls" than of "high-scoring non-seminar girls" wanted most to be remembered as a leader in extra-curricular activities. These tests of significance and others pertaining to the data presented in Table XX can be found in Appendix O.

The chi square statistic applied to the data presented in Table V resulted in a chi square of 7.04. This is not significant at the .05 level of confidence. Thus the frequency of choice is independent of the three groups. This analysis is presented in Appendix P.

The interesting results here are not found in the difference within these adolescent subcultures, but between the attitudes of adolescents in these schools and the attitudes of adolescents reported by Coleman (1961). He reports that 28 or 29 per cent of all girls wanted most to be remembered as brilliant students. In this study 43.4 per cent of all girls in the twenty-four schools indicated brilliant student as their first choice. Thus, either the adolescent subculture values have changed since the findings of Coleman, or the attitudes of adolescents in this sample were and continue to be different from those he reported.

Table XXI shows how high school boys responded to the question:

> "If you had your choice, how would you most like to be remembered in school? (Number in order of preference, 1 for first choice, 2 for second choice, 3 for third choice.)
>
> _____ as most popular
> _____ as an athletic star
> _____ as a brilliant student"

TABLE XXI. HOW HIGH SCHOOL BOYS WOULD MOST LIKE TO BE REMEMBERED (FIRST CHOICES)

| Population | Number and Per Cent | | | | | |
|---|---|---|---|---|---|---|
| | Most Popular | | Athletic Star | | Brilliant Student | |
| | No. | % | No. | % | No. | % |
| Seminar Students (47) | 13 | 27.6 | 5 | 10.6 | 29 | 61.7 |
| Those scoring as high as or higher than those in the seminar (248) | 71 | 28.6 | 62 | 25.0 | 115 | 46.3 |
| All other boys (648) | 197 | 30.4 | 192 | 29.6 | 259 | 39.9 |
| All boys (943) | 281 | 29.7 | 259 | 27.4 | 403 | 42.7 |

There is no significant difference (.05 or .01 level) between the per cents of the three groups responding "most popular." However, a significantly (.01 level) smaller per cent of the seminar boys responded "athletic star" than did either the high-scoring non-seminar boys or all boys. Furthermore, a significantly larger percentage of seminar students responded "brilliant student" than did either the high-scoring non-seminar boys or all other boys. These differences are significant at the .05 and .01 levels respectively. These tests of significance can be found in Appendix Q.

The chi square statistic applied to the data presented in Table XXI resulted in a chi square of 12.61. This is significant at better than the .02 level of confidence. Thus the frequency of choice here is not independent of the three groups. This statistical analysis is presented in Appendix R.

It is again interesting to note that, as was found with girls, a high per cent of these adolescent boys, 42.7 per cent, indicated that they would most like to be remembered as a brilliant student. In Coleman's study (1961) approximately 31 per cent of the boys gave "brilliant student" as their first choice while 43 to 45 per cent of the boys gave "athletic star" as their first choice. In the population included in this study 27.5 per cent of the junior and senior boys gave "athletic star" as their first choice.

All the juniors and seniors were asked to name the best student, the best athlete, and the boy most popular with the girls. The results are presented in Tables XXII, XXIII and XXIV.

TABLE XXII BEST STUDENT IN SCHOOL

| Population | Number and Per Cent | | | | | |
|---|---|---|---|---|---|---|
| | Seminar Students | | High-scoring non-Seminar Students | | Other Students | |
| | No. | % | No. | % | No. | % |
| Seminar Students (100) | 75 | 75.0 | 20 | 20.0 | 5 | 5.0 |
| Those scoring as high as or higher than those in the seminar (395) | 230 | 58.2 | 135 | 34.1 | 30 | 7.5 |
| All other students (774) | 399 | 51.5 | 286 | 36.9 | 89 | 11.4 |
| All juniors and seniors combined (1269) | 704 | 55.4 | 441 | 34.7 | 124 | 9.7 |

From Table XXII it can be seen that a higher per cent of seminar students chose seminar students as best student in school than did the other two groups choose seminar students as best student in school. This difference in per cent between the seminar students and each of the other two groups was significant at the .01 level of confidence.

These tests of significance and others pertaining to the data presented in Table XXII are found in Appendix S.

A higher per cent of the "all other students" group than of the "seminar students" group selected other students as the best student in school. This difference between 5 per cent and 11.4 per cent is significant at the .05 level of confidence.

Both the high-scoring non-seminar student group and the "all other students" group chose as best student a member of the high-scoring non-seminar group more frequently than did the seminar group. These differences between 20 per cent and 34.1 per cent and between 20 per cent and 36.9 per cent are significant at the .01 level of confidence.

The chi square statistic applied to the data presented in Table XXII resulted in a chi square of 23.59. This is significant at considerably better than the .01 level of confidence. Thus, the frequency of choice is not independent of the three groups. This statistical analysis is presented in Appendix T.

It is of further interest to note that whereas the high-scoring non-seminar students chose "best student in school" from the seminar students group 58.2 per cent of the time, seminar students chose "best student in school" from among the high-scoring non-seminar group only 20 per cent of the time. This difference is significant at better than the .01 level of confidence.

The results of the juniors and seniors responses to naming the best athlete in school are presented in Table XXIII. The data in Table XXIII indicate that 22 of 100 seminar students responding named a seminar student as best athlete in school. Similarly 63 of 345 high-scoring non-seminar students or 17.7 per cent named a seminar student as best athlete in school. Other figures in Table XXIII can be read similarly.

TABLE XXIII. BEST ATHLETE IN SCHOOL

| Population | Number and Per Cent | | | | | |
|---|---|---|---|---|---|---|
| | Seminar Students | | High-scoring Non-Seminar Students | | Other Students | |
| | No. | % | No. | % | No. | % |
| Seminar Students (100) | 22 | 22.0 | 32 | 32.0 | 46 | 46.0 |
| Those scoring as (354) high as or higher than those in the seminar | 63 | 17.7 | 134 | 37.8 | 157 | 44.3 |
| All other students (686) | 99 | 14.4 | 213 | 31.0 | 374 | 54.5 |
| All juniors and (1140) seniors combined | 184 | 16.1 | 379 | 33.2 | 577 | 50.6 |

There is no significant difference in the per cent of seminar students mentioned as best athlete in school by the three groups. There is a significant difference (.05 level) between the high-scoring non-seminar students and all other students in the frequency in naming a high-scoring non-seminar student as best athlete in school. There is no significant difference between the high-scoring non-seminar students and "all other students" in the frequency of their choosing high-scoring non-seminar students or best athlete in school. Similarly, in choosing from the "all other students" population, there is no significant difference between the seminar students and the high-scoring non-seminar students or between the seminar students and "all other students," but there is a significant difference between "all other students" and high-scoring non-seminar students. These tests of significance are found in Appendix U.

The chi square statistics applied to the data presented in Table XXIII resulted in a chi square of 13.99, significant at better than the .01 level of confidence. Thus, the frequency of choice is not independent of the three groups. These statistics are found in Appendix V.

Further analysis of the data in Table XXII shows that for the per cent of the total high school population which they represent, seminar students are chosen most frequently as best athlete in school. This same tendency is found in much of the other data.

The data in Table XXIII and the statistical tests indicated that seminar students do not choose the best athlete more or less frequently from any of the three groups than do high-scoring non-seminar students. Other students tend to choose the best athlete from their own group more frequently than do high-scoring non-seminar students and vice versa. When all three categories are taken into consideration, the choices are not independent of the groups.

Table XXIV shows how frequently seminar students, high-scoring non-seminar students, and "all other students" selected the boy most popular with the girls from among their own group and from among the other two groups. Fifteen seminar students selected the boy most popular with the girls as being a seminar participant, while 34 seminar participants selected the boy most popular with the girls as being a high-scoring non-seminar student and 40 seminar students selected the boy most popular with the girls from among the "other students" group.

TABLE XXIV. BOY MOST POPULAR WITH THE GIRLS

| Population | Number and Per Cent | | | | | |
|---|---|---|---|---|---|---|
| | Seminar Students | | High-scoring Non-seminar students | | Other Students | |
| | No. | % | No. | % | No. | % |
| Seminar Students (89) | 15 | 16.8 | 34 | 38.2 | 40 | 44.9 |
| Those scoring as high as or higher than those in the seminar (356) | 43 | 12.0 | 145 | 40.7 | 168 | 47.1 |
| All other students (645) | 75 | 11.6 | 183 | 28.3 | 387 | 60.0 |
| All juniors and seniors combined (1090) | 133 | 12.2 | 362 | 33.2 | 595 | 54.5 |

There is no significant difference (.05 level) between the three groups in the frequency with which they selected a seminar student as most popular.

There is no significant difference between the seminar students and the two other groups in the frequency with which they choose a high-scoring non-seminar boy as most popular with the girls. However, a significantly higher per cent of high-scoring non-seminar students choose high-scoring boys than did "all other students" choose high-scoring non-seminar boys.

There is no significant difference between the seminar students and high-scoring non-seminar students in the frequency with which they choose from the "all other student" group the boy most popular with the girls. However, a significantly larger per cent of "all other students" choose the boy most popular with the girls from their own group than did seminar students and high-scoring non-seminar students choose the boys most popular with the girls from the "all other student" group. These tests of significance can be found in Appendix W.

The chi square statistic applied to the data presented in Table XXIV resulted in a chi square of 21.52 which is significant at better than the .01 level of confidence. Thus, the frequency of choice is not independent of the three groups. This statistical analysis is presented in Appendix X.

As can readily be seen from Table XXIV, the direction for all groups was to pick the boy most popular with the girls from among their own group more frequently than did another group. That is, 16.8 per cent of the seminar students chose the boy most popular with the girls as being from the seminar group. No other group, that frequently, thought that the boy most popular with the girls was a seminar student. Similarly, 58.4 per cent of the choices of the "all other student" group was for students within their group. Although the difference for high-scoring non-seminar students was not significant the direction was apparent.

Table XXV shows how frequently girls within the various groups are mentioned as members of the leading crowd by each of the groups: seminar students, high-scoring non-seminar students, and "all other students."

TABLE XXV. MEMBERS OF THE LEADING CROWD (GIRLS)

| Population | Number and Per Cent | | | | | |
|---|---|---|---|---|---|---|
| | Seminar Students | | High-Scoring Non-Seminar Students | | Other Students | |
| | No. | % | No. | % | No. | % |
| Seminar Students (372) (100) | 103 | 27.6 | 103 | 27.6 | 166 | 44.6 |
| Those scoring as high as or higher than those in the seminar (1358) (371) | 211 | 15.5 | 444 | 32.6 | 703 | 51.7 |
| All other students (2565) (730) | 379 | 14.7 | 688 | 26.8 | 1498 | 58.4 |
| All juniors and seniors combined (4295) (1201) | 693 | 16.1 | 1235 | 28.7 | 2367 | 55.1 |

Table XXV indicates that of 372 choices of 100 seminar boys and girls, 103 choices, or 27.6 per cent of the choices for girls were for a seminar girl. Similarly, of 371 high-scoring non-seminar students, giving 1358 choices of boys, 211 or 15.5 per cent of the choices (girls) were seminar boys. Other parts of the table can be read similarly.

The data in Table XXV show an apparent tendency for each group to choose from among its members. That is, seminar students names seminar girls 27.6 per cent of the time. The other two groups did not choose seminar students that frequently. Similarly high-scoring non-seminar students choose from within their crowd 32.6 per cent of the time, and "all other students" choose from within their group 58.4 per cent of the time.

Table XXVI shows how frequently boys are mentioned as members of the leading crowd by seminar students, high-scoring non-seminar students, and other students.

TABLE XXVI. MEMBERS OF THE LEADING CROWD (BOYS)

| Population | Number and Per Cent | | | | | |
|---|---|---|---|---|---|---|
| | Seminar Students | | High-Scoring Non - Seminar Students | | Other Students | |
| | No. | % | No. | % | No. | % |
| Seminar Students (100) (389 choices) | 102 | 26.2 | 185 | 47.5 | 102 | 26.2 |
| Those scoring as (371) high as or higher than those in the seminar (1501 choices) | 245 | 16.3 | 743 | 49.5 | 513 | 34.1 |
| Other students (730) (2242 choices) | 340 | 15.1 | 815 | 36.3 | 1087 | 48.4 |
| All juniors and (1201) seniors combined (4132 choices) | 687 | 16.6 | 1743 | 42.1 | 1702 | 41.1 |

Table XXVI shows that of 389 choices of seminar boys and girls, 102 or 26.2 per cent of the choices for girls were for a seminar girl as a member of the leading crowd. Similarly, among 371 high-scoring non-seminar students giving 1501 choices, 245, or 16.3 per cent of their choices were seminar girls. Other parts of the table can be read similarly.

The trend for each group to choose from within the group is equally as apparent here as in Table XXV. Of the seminar choices 26.2 per cent were for boys from among their own group. The other two groups did not name seminar boys as members of the leading crowd that frequently.

Interpretations from Tables XXV and XXVI concerning the frequency with which groups are chosen as members of the leading crowd must be made with considerable caution.

The seminar population is considerably smaller than the high-scoring non-seminar population, and this latter population is considerably smaller than the "all other student" population. Thus, when determining chance expected choice this ratio must be taken into consideration. Another factor to be considered before interpretations of this kind can be made is the mean number of choices for each group. In the above tables the mean number of choices for the seminar group is slightly higher than the means of the other two groups. Tests of significance regarding this difference have not been computed.

Table XXVII is a summary of the girls' responses to the question, "What does it take to be a member of the leading crowd?"

The data in Table XVII indicates that 66.1 per cent of all seminar girls mentioned an aspect of personality as "what it takes" to be a member of the leading crowd. Seventy per cent of the high-scoring non-seminar girls and 66.6 per cent of "all other girls" mentioned an aspect of personality. The following types of responses were considered in this category: sociable, get along well, friendly, well liked, fun loving, interesting, understanding.

A high per cent of students mentioned the academic area - category 7. Listing this area were 33.9 per cent of seminar students, 21.8 per cent of high-scoring non-seminar students, and 28.4 per cent of "all other students," who mentioned "grades," brains, intelligence, or something like very good student.

Many responses defied categorization or were mentioned only occasionally and thus were placed in Category 10, "Other". This includes such responses as the following: dating, take part in extra-curricular activities, senior, smoke and drink.

TABLE XXVII. WHAT IT TAKES TO BE A MEMBER OF LEADING CROWD (GIRLS)

| | Number and Per Cent | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1* | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Seminar Students (62) | 41 | 66.1 | 3 | 4.8 | 5 | 8.1 | 5 | 8.1 | 4 | 6.5 | 3 | 4.8 | 21 | 33.9 | 9 | 14.5 | -- | -- | 49 | 79.0 |
| Those scoring as high as those in the seminar (147) | 103 | 70.0 | 9 | 6.1 | 7 | 4.8 | 13 | 8.8 | 6 | 4.1 | 9 | 6.1 | 32 | 21.8 | 7 | 4.8 | 1 | .7 | 101 | 68.7 |
| All others (443) | 295 | 66.6 | 35 | 7.9 | 36 | 8.1 | 45 | 10.1 | 17 | 3.8 | 22 | 5.0 | 126 | 28.4 | 27 | 6.1 | 4 | 1.0 | 295 | 66.6 |
| All students combined (girls) (652) | 439 | 67.3 | 47 | 7.2 | 48 | 7.4 | 63 | 9.7 | 27 | 4.1 | 34 | 5.2 | 179 | 27.5 | 43 | 6.6 | 5 | .8 | 445 | 68.3 |

* 1 - Personality
2 - Looks
3 - Clothes
4 - Neatness
5 - Reputation
6 - Money
7 - Grades
8 - Athlete
9 - Car
10 - Other

Table XXVIII is a summary of the boys' response to the question, "What does it take to be a member of the leading crowd?"

The ten categories in Table XXVIII are the same as those in Table XVII. The figures in Table XXVIII can be read for boys as the figures in Table XVII for girls.

Of all seminar boys sixty-two and two-tenths per cent mentioned an aspect of personality as "what it takes" to be a member of the leading crowd. An aspect of personality was mentioned by 55.3 per cent of high-scoring boys and 49.4 per cent of "all other boys." The direction here is for boys to mention personality less frequently than girls.

As can be seen from comparing column 8 in Tables XXVII and XXVIII, a higher per cent of boys than girls, particularly seminar boys, mention "athlete" as what it takes to be a member of the leading crowd.

Boys also mention having a car (category 9) more frequently than girls.

For the most part the figures in Tables XXII and XXIII show more agreement than disagreement among the three groups concerning what it takes to be a member of the leading crowd.

TABLE XXVIII. WHAT IT TAKES TO BE A MEMBER OF THE LEADING CROWD (BOYS)

| | Number and Per Cent | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Seminar Students (37) | 23 | 62.2 | 2 | 5.4 | 2 | 5.4 | 2 | 5.4 | 1 | 2.7 | 1 | 2.7 | 9 | 24.3 | 13 | 35.1 | 3 | 8.1 | 22 | 59.5 |
| Those scoring as high as those in the seminar (228) | 126 | 55.3 | 14 | 6.1 | 4 | 1.8 | 7 | 3.1 | 3 | 1.3 | 9 | 3.9 | 52 | 22.8 | 45 | 19.7 | 11 | 4.8 | 150 | 65.8 |
| All others (297) | 147 | 49.4 | 6 | 2.0 | 8 | 2.7 | 11 | 3.7 | 4 | 1.3 | 12 | 4.0 | 73 | 24.6 | 51 | 17.2 | 19 | 6.4 | 183 | 61.6 |
| All students (boys) (562) | 296 | 52.7 | 22 | 3.9 | 14 | 2.5 | 20 | 3.6 | 8 | 1.4 | 22 | 3.9 | 134 | 23.8 | 109 | 19.4 | 33 | 5.9 | 355 | 63.2 |

1 - Personality
2 - Looks
3 - Clothes

4 - Neatness
5 - Reputation
6 - Money

7 - Grades
8 - Athlete
9 - Car

10 - Other

TABLE XXIX. LEISURE-TIME ACTIVITIES

| Population | Number and Per Cent | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Outdoor Sports | | Being With Group | | Attending Spectator Events | | Dating | | Hobby | | In-door group Activ. | | Watch-ing Tele-vision | | Listen-ing to Records | | Read ing | | Other | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Seminar Students (113) | 69 | 61.0 | 12 | 10.6 | 6 | 5.3 | 8 | 7.0 | 46 | 40.7 | 28 | 24.7 | 25 | 22.1 | 22 | 19.4 | 83 | 73.4 | 52 | 46.0 |
| Those scoring as high as those in the seminar (433) | 257 | 59.3 | 39 | 9.0 | 18 | 4.1 | 30 | 6.9 | 136 | 31.4 | 137 | 31.6 | 69 | 15.9 | 57 | 13.1 | 191 | 44.1 | 214 | 49.4 |
| All other students (845) | 477 | 56.4 | 66 | 7.8 | 41 | 4.8 | 41 | 4.8 | 248 | 29.3 | 307 | 36.3 | 123 | 14.6 | 134 | 15.9 | 293 | 34.7 | 456 | 54.0 |

The summary of the responses to the question, "What are your favorite leisure-time activities?" is presented in Table XXIX. The numbers indicate how many students in that particular group chose that activity as one of their leisure-time activities. That is, 69 of 113 seminar students, or 61 per cent, mentioned an outdoor sport.

In tabulating the responses no response was put in two categories. That is, watching television was not also considered an indoor group activity. The categories for the activities were taken from Coleman. Outdoor sports included such things as walking, hunting, and fishing. Being with a group included such things as parties, gab sessions, and social life. Attending spectator events included such responses as "going to basketball games," "football games," and "stock car races."

The mean number of responses for 113 seminar students was 3.106, for 443 high-scoring non-seminar students 2.651, and for 845 other students 2.587.

Of the 113 seminar students responding, 83, or 73.4 per cent indicated that reading was one of their favorite leisure time activities. This was a considerably higher per cent than responded similarly in the other two groups and accounts for the biggest single distinguishing factor between the groups. The other two groups mentioned outdoor sports most frequently. The second most frequently mentioned response of the seminar students was outdoor sports. For high-scoring non-seminar students, it was reading. The third most frequently mentioned response of seminar students was a hobby. This category included such responses as knitting, sewing, photography, chess, play a musical instrument, etc.

The responses to the questions "Do your parents try to encourage you in your school work?" are summarized in Table XXX.

TABLE XXX. PARENTS' ATTITUDES TOWARD SCHOOL WORK

| Population | Encouragement From Parents in School Work | | | |
|---|---|---|---|---|
| | Yes | | No | |
| | No. | % | No. | % |
| Seminar Students (113) | 102 | 90.2 | 11 | 9.7 |
| --No. and % responding | ----- | 113 | (100%) | ------ |
| Those scoring as high as those in the seminar (433) | 396 | 91.8 | 35 | 8.1 |
| --No. and % responding | ----- | 431 | (99.5%) | ------ |
| All other students (856) | 792 | 93.2 | 57 | 6.7 |
| —No. and % responding | ----- | 849 | (99.1%) | ------ |

Of 113 seminar students responding 102 or 90.2 percent said "yes" and 11 or 9.7 per cent said "no". The other figures in the table can be read similarly.

There is no significant difference in the three groups in their response to the question, "Do your parents encourage you in your school work?" These tests of significance comprise Appendix Y.

The responses to the question "Do your parents want you to go to college are summarized in Table XXXI.

TABLE XXXI. PARENTS' ATTITUDES TOWARD COLLEGE

| Population | Parents' Wishes on Attending College | | | |
|---|---|---|---|---|
| | Yes | | No | |
| | No. | % | No. | % |
| Seminar Students (113)<br>--No. and % responding | 111<br>------ | 100.0<br>--- 111 | ---<br>(98.2%) | ---<br>------ |
| Those scoring as high as those in the seminar (433)<br>--No. and % responding | 350<br>----- | 95.3<br>-- 367 | 17<br>(84.7%) | 4.6<br>------ |
| All other students (856)<br>--No. and % responding | 515<br>----- | 88.9<br>-- 579 | 64<br>(67.6%) | 11.0<br>------ |

Although a significantly (.01 level) higher per cent of seminar students indicated that their parents want them to attend college than do the other two groups, it is of even greater interest to note that even among the "all other students" group 88.9 per cent of the students indicated that their parents want them to attend college. These tests of significance comprise Appendix Z.

Table XXXI shows the responses to the semi-projective type question:

> "Bill was doing well in science class because he had a hobby of collecting and identifying insects. One day his science instructor asked Bill if he would act as the assistant in the class. Bill didn't know whether this was an honor to be proud of or whether he would be the teacher's pet." "How would you feel -- that it would be something to be proud of or wouldn't it matter?"

something to be proud of ☐ something I wouldn't care for ☐

I'd have mixed feelings ☐

"Now suppose you decided to agree to be the assistant in science. What would your friends think when they found out about it?"

They would envy me and look up to me. ☐

They would kid me about it, but would still envy me. ☐

They would look down on me. ☐

They wouldn't care one way or the other. ☐

In the questionnaire for girls "Mary" was substituted for "Bill."

TABLE XXXII. AN ASSISTANT IN SCIENCE (GIRLS -- BOYS)

| Population | Feelings About Being Asked to be Science Class Assistant | | | | | |
|---|---|---|---|---|---|---|
| | Proud | | No | | Mixed | |
| | No. | % | No. | % | No. | % |
| Seminar Students | | | | | | |
| (113) 66 Girls | 37 | 56.0 | 1 | 1.5 | 28 | 42.4 |
| 47 Boys | 29 | 61.7 | 2 | 4.2 | 16 | 34.0 |
| 113 total | 66 | 58.4 | 3 | 2.6 | 44 | 38.9 |
| No. and % responding | 113 (100.0%) | | | | | |
| Those scoring as high as those in the | | | | | | |
| seminar 162 Girls | 102 | 62.9 | 8 | 4.9 | 52 | 32.0 |
| (433) 268 Boys | 144 | 53.7 | 28 | 10.4 | 96 | 35.8 |
| 430 total | 246 | 57.2 | 36 | 8.3 | 148 | 34.1 |
| No. and % responding | 430 (99.3%) | | | | | |
| All other students | | | | | | |
| (856) 504 Girls | 275 | 54.5 | 50 | 9.9 | 179 | 35.5 |
| 350 Boys | 174 | 49.7 | 53 | 15.1 | 123 | 35.1 |
| 854 total | 449 | 52.5 | 103 | 12.0 | 302 | 35.3 |
| No. and % responding | 854 (99.7%) | | | | | |

The results shown in Table XXXII indicate that 61.7 per cent of the seminar boys, 53.7 per cent of the high-scoring non-seminar boys, and 49.7 per cent of "all other boys" felt it would be something to be proud of. The differences between these per cents are not significant (.05 level). These tests of significance and others pertaining to the data presented in Table XXXII are found in Appendix AA.

Fifty-six per cent of the seminar girls, 62.9 per cent of the high-scoring non-seminar girls, and 54.5 per cent of "all other girls" indicate that being a science assistant would be something to be proud of. The difference between 63 and 54 per cent is significant at the .05 level of confidence. Thus, a significantly higher per cent of high-scoring non-seminar girls than of all other girls would feel proud about being a science class assistant. The difference between 56 and 63 per cent is not significant (.05 level). When the responses of the boys and girls are combined, there is no significant difference (.05 level) between the three groups in the per cents responding "something to be proud of."

The chi square statistic applied to the data on boys presented in Table XXXII resulted in a chi square of 6.83, which is not significant. Thus, for boys, the frequency of choice is independent of the three groups.

The chi square for girls was 18.41 which is significant at better than the .01 level. Thus, for girls, the frequency of choice is not independent of the three groups. These chi square tests comprise Appendicies BB and CC.

The results shown on Table XXXIII indicate that 64.2 per cent of the seminar students, 60.5 per cent of the high-scoring non-seminar students, and 50.2 per cent of all other students responded "they would kid me about it, but they would still envy me." The second part of the projective situation other figures in Table XXXIII can be read similarly.

TABLE XXXIII. OTHER PUPIL ATTITUDES TOWARD A SCIENCE ASSISTANT

| Population | Friends' Opinions About Being an Assistant in Science Class | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Envy, Look Up | | Kid But Envy | | Look Down | | Immaterial | |
| | No. | % | No. | % | No. | % | No. | % |
| Seminar Students | | | | | | | | |
| (113) 66 Girls | 2 | 3.0 | 45 | 68.1 | 1 | 1.5 | 18 | 27.2 (66 G |
| 47 Boys | 5 | 10.8 | 27 | 58.6 | 1 | 2.1 | 13 | 28.2 (46 B |
| 113 total | 7 | 6.2 | 72 | 64.2 | 2 | 1.7 | 31 | 27.6 (112 |
| No. and % Responding | 112 (99.1%) | | | | | | | |
| Those scoring as high as those in the seminar 162 Girls | 5 | 3.1 | 103 | 63.9 | 6 | 3.7 | 47 | 29.1 (161 G |
| (433) 268 Boys | 12 | 4.5 | 155 | 58.4 | 12 | 4.5 | 86 | 32.4 (265 B |
| 430 total | 17 | 3.9 | 258 | 60.5 | 18 | 4.2 | 133 | 31.2 (426 |
| No. and % Responding | 426 (98.3%) | | | | | | | |
| All Other Students | | | | | | | | |
| (856) 504 Girls | 24 | 4.7 | 249 | 49.7 | 28 | 5.5 | 200 | 39.9 (501 G |
| 350 Boys | 7 | 2.0 | 174 | 51.1 | 13 | 3.8 | 146 | 42.9 (340 B |
| 854 total | 31 | 3.6 | 423 | 50.2 | 41 | 4.8 | 346 | 41.1 (841 |
| No. and % Responding | 841 (98.2%) | | | | | | | |

The chi square statistic applies to the data on boys presented in Table XXXIII, resulted in a chi square of 16.95 which is significant at better than the .01 level of confidence. Thus, for boys, the frequency of choice is not independent of the three groups.

The chi square for girls was 16.09, which is also significant at better than the .01 level of confidence. Hence, for girls, the frequency of choice is not independent of the three groups. These chi square tests comprise Appendices DD and EE.

The direction of the difference is in the expected direction. That is, more seminar students perceive their colleagues as envying them and looking up to them as well as kidding them, than do the other groups in this hypothetical situation. Similarly, fewer seminar students than the other two groups, believe that fellow students would look down on them and fewer seminar students believe that other students wouldn't care one way or another.

Table XXXIV shows the responses to the second semi-projective situation question: The question for boys was:

> "Tom had always liked to fool around with wood and build things and was very good at it. Once he built a boat. Because of this, the shop teacher singled him out to act as his special assistant. Tom didn't know what do do, since he had no use for boys who hung around the teacher." If you were in Tom's place, what would you do?"
>
> "I would agree to be an assistant. ☐
> I wouldn't agree to be an assistant. ☐
> I am not sure. ☐ "
>
> "If you did become the assistant in the shop class, would they look up to you for it, or would they look down on you?"
>
> "They would envy me and look up to me. ☐
> They would kid me about it, but would still envy me. ☐
> They would look down on me. ☐
> They wouldn't care one way or the other. ☐ "

The question for girls was:

"Jane's hobby was sewing. She sewed many of her own clothes and won prizes at the county fair. Because of this her Home Economics teacher singled her out as her special assistant. Jane didn't know what to do since she had no use for girls who hung around the teacher. If you were in Jane's place, what you you do?"

"I would agree to be an assistant. ☐
I wouldn't agree to be an assistant. ☐
I am not sure. ☐ "

"If you did become the assistant in the home economics class, would your friends look up to you for it or would they look down on you?"

"They would envy and look up to me. ☐
They would kid me about it, but would still envy me. ☐
They would look down on me. ☐
They wouldn't care one way or the other. ☐ "

The results are presented in Table XIX.

TABLE XXXIV. AN ASSISTANT IN SEWING CLASS (GIRLS) OR INDUSTRIAL ARTS CLASS (BOYS)

| Population | | Feelings If Asked to be Sewing Class or Industrial Arts Class Assistant. | | | | | |
|---|---|---|---|---|---|---|---|
| | | Yes | | No | | Not Sure | |
| | | No. | % | No. | % | No. | % |
| Seminar Students | | | | | | | |
| (113) | 66 Girls | 23 | 34.8 | 13 | 19.6 | 30 | 45.4 |
| | 46 Boys | 13 | 28.8 | 10 | 21.7 | 23 | 50.0 |
| | 112 Total | 36 | 32.1 | 23 | 20.5 | 53 | 47.3 |
| No. and % Responding | | 112 (99.1%) | | | | | |
| Those scoring as high as those in the | | | | | | | |
| seminar | 161 Girls | 58 | 36.0 | 24 | 14.9 | 79 | 49.0 |
| (433) | 267 Boys | 80 | 29.9 | 69 | 25.8 | 118 | 44.1 |
| | 428 Total | 138 | 32.2 | 93 | 21.7 | 197 | 46.0 |
| No. and % Responding | | 428 (98.8%) | | | | | |
| All other students | | | | | | | |
| (856) | 502 Girls | 163 | 32.4 | 76 | 15.1 | 263 | 52.3 |
| | 351 Boys | 113 | 32.1 | 67 | 19.0 | 171 | 48.7 |
| | 853 Total | 276 | 32.3 | 143 | 16.7 | 434 | 50.8 |
| No. and % Responding | | 853 (99.6%) | | | | | |

From the data presented in Table XXXIV it can be observed that there is relatively little difference in the responses of the three groups. Of the seminar girls, 34.8 per cent responded "yes," while 36 per cent of the high-scoring non-seminar girls and 32.4 per cent of "all other girls" responded "yes". A similar pattern is found for boys.

The chi square statistic applied to the data on boys presented in Table XXXIV resulted in a chi square of 2.11 which is not significant at the (.01) level of confidence. Thus, for boys the frequency of choice is independent of the three groups.

The chi square for girls was 4.27 which is not significant at the (.01) level of confidence. Hence, for girls the frequency of choice is independent of the three groups. These chi square tests comprise Apprndices FF and GG.

The responses to the question, "If you did become the assistant in shop class, would your friends look up to you for it, or would they look down on you?" are presented in Table XXXV.

TABLE XXXV. OTHER PUPILS' ATTITUDES TOWARD A SEWING CLASS ASSISTANT AND AN INDUSTRIAL ARTS CLASS ASSISTANT.

| Population | Friend's Opinions About Being an Assistant in Sewing Class or Industrial Arts Class | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Envy Look Up | | Kid But Envy | | Look Down | | Immaterial | | |
| | No. | % | No. | % | No. | % | No. | % | |
| Seminar Students | | | | | | | | | |
| (113) 66 Girls | 5 | 7.5 | 29 | 43.9 | 7 | 10.6 | 25 | 37.8 | (66 G |
| 46 Boys | 4 | 8.6 | 21 | 45.6 | 5 | 10.8 | 16 | 34.7 | (46 B |
| 112 total | 9 | 8.0 | 50 | 44.6 | 12 | 10.7 | 41 | 36.6 | |
| No. and % Responding | | | | | 112 (99.1%) | | | | |
| Those scoring as high as those in the seminar | | | | | | | | | |
| (433) 161 Girls | 59 | 5.7 | 77 | 49.0 | 10 | 6.3 | 61 | 38.8 | (157 G |
| 267 Boys | 13 | 4.8 | 120 | 44.9 | 23 | 8.6 | 111 | 41.5 | (267 B |
| 428 total | 22 | 5.1 | 197 | 46.4 | 33 | 7.7 | 172 | 40.5 | |
| No. and % Responding | | | | | 424 (97.9%) | | | | |
| All other students | | | | | | | | | |
| (856) 502 Girls | 53 | 10.7 | 193 | 39.1 | 44 | 8.9 | 203 | 41.1 | (493 G |
| 351 Boys | 13 | 3.7 | 132 | 38.3 | 38 | 11.0 | 161 | 46.8 | (344 B |
| 853 total | 66 | 7.8 | 325 | 38.8 | 82 | 9.7 | 364 | 43.4 | |
| No. and % Responding | | | | | 837 (97.8%) | | | | |

Table XXXV shows that 7.5 per cent of the seminar girls, 5.7 per cent of the high scoring non-seminar girls and 10.7 per cent of "all other girls," that other pupils would envy them and look up to them if they became an assistant in a home economics sewing class. Similarly, 8.6 per cent of the seminar boys, 4.8 per cent of the high-scoring non-seminar boys and 3.7 per cent of "all other boys" believe that other pupils would envy them and look up to them if they became an assistant in a shop class. Other figures in the table can be read similarly.

The chi square statistic applied to the data on girls presented in Table XXXV resulted in a chi square of 7.91 which is significant at the .05 level of confidence. Thus, for the girls the frequency of choice is not independent of the three groups.

The chi square for boys was 6.77, which is not significant at the .05 level of confidence. Hence, for boys, the frequency of choice is independent of the three groups. These chi square tests comprise Appendices HH and II.

The summary of responses to the question: "Is your school work interesting?" is presented in Table XXXVI. The students were directed to check the appropriate term on a five-point rating scale in response to this question. The scale was as follows:

/ always / usually / sometimes / seldom / never

TABLE XXXVI. IS YOUR SCHOOL WORK INTERESTING

| | Always | | Usually | | Sometimes | | Seldom | | Never | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Seminar Students (113) | 8 | 7.1 | 75 | 66.9 | 28 | 25.0 | 1 | .8 | -- | -- |
| No. and % Responding | | | | | | 112 (99.1%) | | | | |
| Those scoring as high as those in the seminar (433) | 22 | 5.1 | 264 | 61.6 | 124 | 28.9 | 16 | 3.7 | 2 | 4 |
| No. and % Responding | | | | | | 428 (98.8%) | | | | |
| All other students (856) | 20 | 2.3 | 483 | 56.8 | 303 | 35.6 | 31 | 3.6 | 13 | 1.5 |
| No. and % Responding | | | | | | 850 (99.2%) | | | | |

Checking always were 7.1 per cent of the seminar students, 5.1 per cent of the high-scoring non-seminar students, and 2.3 per cent of "all other students." None of the seminar students checked "never," two of the high-scoring non-seminar students checked "never," and 13 or 1.5 per cent of the "all other students" group indicated "never". Other parts of the table can be read similarly.

The chi square statistic applied to the data presented in Table XXXVI resulted in a chi square of 25.63, which is significant at better than the .01 level of confidence. Thus, the frequency of choice is not independent of the three groups. This chi square test comprises Appendix JJ.

Examination of the data in Table XXXVI shows an expected trend. That is, seminar students more frequently than high-scoring non-seminar students and high-scoring non-seminar students more frequently than "all other students" find their school work "always" or "usually" interesting.

## SUMMARY AND CONCLUSION

The results of the administration of the STEP in science, social studies and mathematics indicated that there were many students in these high schools not attending the seminars who did score as high as or higher than some students admitted to the seminars. Following Coleman, it was hypothesized that the reason these students did not attend the seminars could partly be found by an analysis of adolescent values. In an attempt to assess these values, a somewhat non-directive questionnaire was designed for all junior and senior girls and a similar questionnaire was designed for all junior and senior boys. The results indicated the following:

As might be expected, a higher per cent of seminar students than of high scoring non-seminar students plan to go to college. However, over 62 per cent of all juniors and seniors in these high schools plan to go to college.

When naming the most popular boy in high school, seminar girls, high-scoring non-seminar girls and "all other girls" choose differently from among the three groups. Seminar girls tend to name seminar boys more frequently than do the other two groups. Similarly, the "all other girls" group tends to select the most popular boy from "all other boys" more frequently than do the other two groups select the most popular boy from the "all other boys" group.

Similarly, boys from the three groups choose the most popular boy in high school from among the three groups in a different proportion. However, seminar boys tend to choose the most popular boy in high school from among the high-scoring non-seminar boys. Both the high-scoring non-seminar boys and "all other boys" choose seminar boys more frequently than do seminar boys.

The three groups of boys, when naming the most popular girl in high school from among the three groups of girls select in the same proportion.

When naming the most popular girl in high school from among the three groups the groups do not select in the same proportion. Seminar girls name a seminar girl as most popular girl in high school more frequently than do the high-scoring non-seminar girls name a seminar girl as most popular girl.

The responses of the three groups of girls to the question "How would you most like to be remembered" indicated that the proportions choosing "most popular", "leader in extra curricular activities" and "brilliant student" do not differ. A higher per cent of all girls in these schools selected brilliant student than did the girls in the schools included in the Coleman study.

The responses of the three groups of boys to the question "How would you most like to be remembered" indicated that the proportions choosing "most popular", "athletic star", and "brilliant student" are different for the three groups. A significantly higher per cent of seminar boys, 61.7 per cent, than of the other two groups of boys responded "brilliant student". A higher per cent of all boys in these schools indicated that they would most like to be remembered as a brilliant student than did the boys in the schools reported in the Coleman studies.

The three groups of students, boys and girls combined, did not select in the same proportion from among the three groups when asked to name the best athlete. There was a tendency for each group to select from among their own group. A student from the "all other students" group was named most frequently by all three groups.

For the per cent of the population which they represent, seminar students were chosen most frequently as best athlete in school. This same tendency was found when the students made other choices.

The three groups of students, boys and girls combined, did not select in the same proportion from among the three groups when asked to name the boy most popular with the girls. The trend for all groups was to pick the boy most popular with the girls from among their own group.

When asked to name the members of the leading crowd, both boys and girls from all groups tended to mention students in their own group.

In listing what it takes to be a member of the leading crowd, both boys and girls mentioned an aspect of personality more frequently than they mentioned anything else.

Among the seminar students, 73.4 per cent indicated that reading was one of their favorite leisure time activities. This was a considerably higher per cent than responded similarly in the other two groups and accounts for the biggest single distinguishing factor between the groups.

There is no significant difference in the three groups in their response to the question, "Do your parents encourage you in your school work?"

A significantly higher per cent of seminar students indicated that their parents want them to attend college. However, even among the "all other students" group, 88.9 per cent indicated that their parents want them to attend college.

The three groups of boys responses indicating their feelings toward being an assistant in science class were not different.

The responses of the three groups of girls indicated that their feelings toward being an assistant in science class were different.

Both seminar boys and seminar girls differ from the other two groups in how they perceive their classmates would feel toward them if they were an assistant in a science class. More seminar students perceive their classmates as envying them and looking up to them.

The responses of the three groups of boys indicated that their feelings toward being an assistant in an industrial arts class were not different.

The responses of the three groups of girls indicated that their feelings toward being an assistant in a sewing class were not different.

Seminar boys and seminar girls do not differ from the other two groups in how they perceive their classmates would feel if they were an assistant in industrial arts for boys, or an assistant in a sewing class for girls.

Seminar students more frequently than high-scoring non-seminar students and high-scoring non-seminar students more frequently than "all other students" find their school work "always" or "usually" interesting.

# CHAPTER IV

## THE REASONS GIVEN BY OTHER ABLE STUDENTS FOR NOT PARTICIPATING

In order to find out directly why high-scoring juniors and seniors do not attend any seminars, a questionnaire was designed on the basis of suggestions of the area guidance counselors. A copy of this questionnaire comprises Appendix KK. Copies of this questionnaire, along with the list of high-scoring students not attending the seminars, and some general directions were mailed to the schools on March 14. See Appendix LL. These questionnaires were administered only to those juniors and seniors not in any seminar who scored as high as or higher than the lowest person in the seminar on the STEP in science, mathematics, and social studies. In some cases these students scored higher than the lowest person in only one seminar. In other instances, certain students scored higher than the lowest seminar student in all three areas.

The responses to question one: "Do you know that certain students from your high school attend classes at Oneonta State University College of Education on Saturday mornings?" "Yes ☐ No ☐" are presented in Table XXXVII according to sex and grade. The data indicate that 90 per cent or more of all the groups knew that students from their high school attend classes at SUCE on Saturday morning.

TABLE XXXVII. KNOWLEDGE ABOUT THE EXISTENCE OF THE SATURDAY SEMINARS

| Group | Yes | | No | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Junior Boys | 126 | 90.0 | 14 | 10.0 |
| Junior Girls | 69 | 98.5 | 1 | 1.4 |
| Senior Boys | 116 | 90.6 | 12 | 9.3 |
| Senior Girls | 84 | 96.5 | 3 | 3.4 |
| All Juniors | 195 | 92.8 | 15 | 7.1 |
| All Seniors | 200 | 93.0 | 15 | 7.0 |
| All Boys | 242 | 90.2 | 26 | 9.7 |
| All Girls | 153 | 97.4 | 4 | 2.5 |
| Total Students | 395 | 92.9 | 30 | 7.0 |

The data further suggest that more boys than girls indicated that they did not know that certain students from their high schools were attending the Saturday Seminars.

The summary of responses to the second question is presented in Table XXXVIII. The second question was, "If you know of these classes, about how long have you known about them?" The mean length of time that junior boys indicated that they had known about the Saturday Seminars was 16 months; for junior girls, 21 months. All groups indicated that they had known about the classes, on the average, for well over a year. Examination of the individual responses indicated that a very few individuals had only known about the seminars for a short time. The variance of the responses was low. Therefore, the reason many high-scoring students are not attending the seminars is not because they do not know about it or because they did not know about it soon enough to have taken the qualifying tests.

TABLE XXXVIII. AVERAGE LENGTH OF TIME THESE STUDENTS HAVE KNOWN ABOUT THE SATURDAY SEMINARS.

| Group | Average Length of Time (Mo.) | Group | Average Length of Time (Mo.) |
|---|---|---|---|
| Junior Boys | 16 | All Juniors | 18 |
| Junior Girls | 21 | All Seniors | 20 |
| Senior Boys | 18 | All Boys | 17 |
| Senior Girls | 23 | All Girls | 22 |
| | | Average | 19 |

The high-scoring juniors and seniors were next asked "Have you ever been asked by your teacher, guidance counselor, or principal if you would like to attend these classes?" Their responses are summarized in Table XXXIX.

TABLE XXXIX. STUDENTS WHO HAVE BEEN ASKED IF THEY WOULD LIKE TO ATTEND CLASSES.

| Group | Yes | | No | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Junior Boys | 37 | 26.4 | 103 | 73.5 |
| Junior Girls | 28 | 40.0 | 42 | 60.0 |
| Senior Boys | 27 | 21.2 | 100 | 78.7 |
| Senior Girls | 27 | 30.6 | 61 | 69.3 |
| All Juniors | 65 | 30.9 | 145 | 69.0 |
| All Seniors | 54 | 25.1 | 161 | 74.8 |
| All Boys | 64 | 23.9 | 203 | 76.0 |
| All Girls | 55 | 34.8 | 103 | 65.1 |
| Total | 120 | 28.2 | 305 | 71.7 |

Table XXXIX indicates that 120 students were asked if they would like to attend these classes while 305 were not asked. The table shows that 40.0 per cent of these high-scoring junior girls indicated that they had been asked while only 26.4 per cent of the boys indicated that they had been asked. This trend continued among the seniors; 30.6 per cent of the high-scoring senior girls indicated that they had been asked while only 21.2 per cent of the senior boys indicated that they had been asked. The difference between 40 per cent and 26 per cent is significant at the .05 level of confidence ($t = 2.03$). The difference between 31 per cent and 21 per cent is not significant ($t = 1.45$). Thirty-four and eight-tenths per cent of all girls responded "yes" while 23.9 per cent of all boys responded "yes." The difference between 35 and 24 per cent is significant at better than the .05 level of confidence ($t = 2.39$).

Table XXXX shows the summary of the responses to the question: "If you were asked by one of these people, would you attend the Saturday morning classes?"

Yes ☐ No ☐ I don't know ☐

TABLE XXXX. WOULD ATTEND IF ASKED

| Group | Yes | | No | | I don't know | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| Junior Boys | 45 | 32.1 | 35 | 25.0 | 60 | 42.8 |
| Junior Girls | 26 | 37.6 | 15 | 21.7 | 28 | 40.5 |
| Senior Boys | 24 | 18.7 | 45 | 35.1 | 59 | 46.0 |
| Senior Girls | 35 | 39.7 | 16 | 18.1 | 37 | 42.0 |
| All Juniors | 71 | 33.9 | 50 | 23.9 | 88 | 42.1 |
| All Seniors | 59 | 27.3 | 61 | 28.2 | 96 | 44.4 |
| All Boys | 69 | 25.7 | 80 | 29.8 | 119 | 44.4 |
| All Girls | 61 | 38.8 | 31 | 19.7 | 65 | 41.4 |
| Total | 130 | 30.5 | 111 | 26.1 | 184 | 43.2 |

The results indicate that 45 junior boys answered "yes," 35 answered "no," and 60 answered "I don't know." The direction is for more girls than boys to respond "yes;" as 39.7 per cent of all senior girls responded "yes" while only 18.7 per cent of the senior boys responded "yes." The difference between 38 and 32 per cent, junior boys and girls, is not significant ($t = .939$). The difference between 40 per cent and 19 per cent, senior boys and senior girls, is significant at better than the .01 level of confidence ($t = 3.33$). The difference between all boys, 25.7 per cent, and all girls, 38.8 per cent, is also significant at better than the .01 level of confidence ($t = 2.71$)

The chi square statistic of 2.44 indicated that the responses are independent of class (juniors and seniors) in high school. The chi square statistic of 9.30 indicated that the responses are not independent of sex (all girls and all boys). See Appendices MM and NN.

Since the questionnaires were administered for the most part, in the latter part of March, many seniors might have realized that their chances of participating in the seminars were rather remote. That is, the seminar participants were selected in September. Those few asked to participate after September were only replacements for those who dropped out, or to replace those who decided to attend the seminars for only one semester. On the other hand, juniors could hypothesize that the hypothetical question referred to their senior year, this possible realization on the part of the seniors, however, was not frequently reflected in their answers to question five. However, one student, as an illustration of the exception, said that he would not have time to attend the seminars during the semmer as he had to work to get enough money to attend college in the fall. Undoubtedly he hypothesized that the seminars were continuing into the summer.

Table XXXXI represents an attempt to categorize the responses of students to question five. However, such categorization sometimes serves to cloud the "real" response, and certainly the individuality of the responses. Thus, some sample responses are given here to illustrate not only the complexity of the tabulation procedure, but also to present a more accurate picture of the individuality of the responses. Question Five was "Give the reason for your answer in Question Four. In other words, answer 'why' to Question Four." For those who responded "yes" to Question Four, the following are some typical responses:

> I would like to attend the Saturday morning classes because I want to learn as much math as possible and this is an excellent opportunity to do so.

From what I've heard, these classes are very interesting and beneficial. I feel that the added interest of an outside activity in math, the humanities, etc., would inspire me to try to do even better in my regular classes, not to mention the benefits from the Saturday morning class itself.

I'm not sure what courses are offered and whether or not the courses would benefit me in any way which would help me in college.

Yes, because I think they would help in later years and also they would be interesting.

Am interested in the science course provided at the Saturday morning seminar. Since I am interested in going into some field of science when I graduate from college.

I would like to attend the social studies classes because I am interested in becoming a history teacher and would like to learn more about the subject.

I feel that I would get a great deal out of these classes that would help me greatly in my future education. These classes could better my chances for a successful education and an educational future.

If the college had any courses which would interest and aid me in my chosen field, I would be very interested and willing to spend one half day Saturday studying.

I would like to learn what I could about the subjects offered at these classes. It would at some time in my future come in handy.

I would attend these Saturday morning classes because in a way it might help me prepare for the future. It also depends on what these classes are about and how important they will be to me. If I attend these classes, would it help me now or would there be a special function for these classes? I don't know.

For those who responded "I don't know" to Question Four, the following were selected as typical answers to Question Five.

Saturday morning during the winter I am usually busy with farm work or working out with our ski team.

I'm not sure what courses are offered and whether or not the courses would benefit me in any way which would help me in college.

I don't know if I would attend the Saturday morning classes because I'm not sure if I would have time.

I think I might like to attend these classes but I'm not sure if I could. I never thought of myself that smart in any of my subjects. I may have the purpose of these classes wrong. I never inquired about them.

Work at our home and other activities done on weekends.

I might not be here on Saturday morning during the summer.

I don't know whether I would attend these classes or not if asked because I do not know what their purpose is and if they would benefit me in any way if I did attend them.

I have heard a great deal about these classes and if I thought it would help further my education and improve my chances of entering a college I would be gald to attend. But, I may find it necessary to work this summer.

I'm not sure if I would attend these classes because I don't know if they would interest me and also because they would interfere with work on the home farm.

I don't know for certain because I don't know what it would entail. I'm not sure of what subjects are offered or even if I could handle the required subjects.

I don't know much about these classes. I don't know what what these classes include or what I could get out of the classes.

I would first have to make a careful study of how much I felt I would gain from participating in these classes since I would have to give up my Saturday job which is my only means of income. I am not sure because I do not know enough about the classes to be sure of what I would learn.

For those who responded "No" to Question Four, the following were selected as typical answers to Question Five.

Not interested.

Because I am very busy on Saturdays. I have football games. I have to work and also I will have a lot of homework to do.

Because I have to work all day on Saturday.

My Saturdays will be full. I feel that I like football well enough that I must be ready for it. If I attend a class on Saturday morning, I will not be alert for the game.

I like Saturdays free. In the winter I go skiing every Saturday and sometimes work in the summer.

I don't want to go to Oneonta every Saturday. It would probably be too hard.

Because during the fall months I have to cheerlead on Saturday afternoons.

I would not attend the classes on Saturday morning because my marks for my regular classes are not high enough. If I studied at all on Saturday mornings, it should be to improve my scholastic record in school.

I once attended them. There were very few I liked. It seemed to me that they did too much explaining of a subject. Ex - What is art?

I want my Saturday morings to myself and I don't even know what these classes are all about.

I usually work on Saturday mornings.

Work at home and other activities done on weekends.

Because I sometimes work on Saturdays and other times I like to go hunting or fishing, depending on the season. Furthermore, I think five days in a row is enough.

## TABLE XXXXI

"REASONS" GIVEN BY THOSE HIGH SCORING STUDENTS WHO ARE NOT INTERESTED IN ATTENDING THE SEMINARS AND BY THOSE WHO DON'T KNOW WHETHER THEY ARE INTERESTED IN ATTENDING.

| Group | Categories | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| "No" | Number | 57 | 4 | 19 | 13 | 7 | 6 | 8 | 18 | 26 | 0 | 7 | 2 |
|  | Percent | 50.8 | 3.5 | 16.9 | 11.6 | 6.2 | 5.3 | 7.1 | 16.0 | 23.2 | 0 | 6.2 | 1.7 |
| "I Don't Know" | Number | 66 | 17 | 28 | 4 | 6 | 7 | 6 | 8 | 18 | 21 | 16 | 63 |
|  | Percent | 35.8 | 9.2 | 15.2 | 2.1 | 3.2 | 3.8 | 3.2 | 4.3 | 9.7 | 11.4 | 8.6 | 34.2 |

Explanation of Categories

1. Work
2. Transporation
3. Vague Response
4. No Interest
5. Not of Help in Future Plans
6. No Benefit
7. Conflicts with School, Connected Activities
8. Free Time is More Important
9. Other
10. Would Attend Under Specified Conditions
11. Low Self-Concept
12. Need More Information

The data in Table XXXXI indicate that 57 high scoring students or 50.8 per cent of the high scoring juniors and seniors, that responded "No" to Question Four, mentioned that one reason they were not interested in attending the seminars was because of work. In many cases students mentioned more than one reason for their responses. Thus, the rows add up to more than 100 per cent, as the per cent represents per cent of students rather than per cent of responses.

Sixty-six of the students who responded "I don't know," or 35.8 per cent, mentioned work as one reason why they were not interested in attending the seminars. "Work" was the most frequent response of those students who responded "No" to Question Four and the most frequent response of those who responded "I don't know" to Question Four. Conversations with guidance counselors and principals indicates that in some cases this is a legitimate excuse. For example, one girl wrote, "My Saturday job is my only source of income." The guidance counselor agreed that in this case it was quite probably true. Another boy replied that he had to help on the farm since they had over 50 dairy cattle. The principal confirmed this, pointing out that the boy not only worked Saturdays, and hence could not attend the seminars, but also worked every night after school and thus, could not participate in extra curricular activities. Another respondent replied that he needed to earn money to go to college. The guidance counselor believed this response to be true.

In other cases, guidance counselors pointed out that work was an excuse. For example, one respondent replied that he was too busy working at home. The guidance counselor quickly pointed out that the boy was lazy and spent considerable time at the corner drug store loafing. Work for him was an excuse.

For those who responded "I don't know" to Question Four 63, or 34.2 per cent, gave as the reason for their response the fact that they needed information. That is, they wanted to know such things as: "What is offered?" "How much time does it take?" "I don't know if they would benefit me in what I want to do." These responses suggest further that the respondents have not thought about attending the seminars, or they have not put together the information they do have with their life goals to plan their future.

Of those responding "No" to Question Four, 16.9 per cent gave vague replies, as "No time" and "Too busy" to Question Five. These replies were generally short and without explanation. Thus, this category was provided.

The "other" category, Number 9, was the catch-all or miscellaneous category. This included such responses as: It would interfere with homework, hobbies, music, cost, family problems, etc. Twenty-six responses of those responding "No" and eighteen responses of those answering "I don't know" were placed in Category 9.

The fourth most frequently mentioned reason by these who responded "No" to Question Four, had to do with free time, and constitutes Category 8. Eighteen students mentioned that they valued their free time and hence, were not interested in attending the Saturday Seminars.

## Summary and Conclusion

In order to find out why high-scoring juniors and seniors do not attend any seminars, a questionnaire was administered by the guidance counselor to these juniors and seniors in each of the 24 participating schools. The results of the questionnaire indicated the following:

(1) That over 90 per cent of all juniors and seniors knew about the Saturday seminars.

(2) More girls than boys knew that certain students from their high schools were or had been attending Saturday seminars.

(3) The ninety plus per cent of high scoring juniors and seniors have known about the seminars, for a long enough time to have taken the qualifying tests.

(4) One hundred and twenty of these juniors and seniors were asked by their teachers, guidance counselor or principal if they would like to attend these classes while 305 indicated that they were not asked.

(5) More juniors and senior girls than boys indicated that they had been asked if they would like to attend.

(6) 30.5 per cent of the high scoring juniors and seniors indicated that they would attend the Saturday morning classes if they were asked, while 26.1 per cent responded "No" and 43.2 per cent responded " I don't know." The responses of all juniors to this question were not statistically significant from the responses of all seniors. The responsee of all girls were statistically different from the responses of all boys. A greater number of girls responded "Yes".

(7) Over 50 per cent of all high scoring juniors and seniors who are not interested in attending the seminar as well as those who don't know if they would attend the seminars if given a chance, indicated that the reason for their response is work.

(8) Examination of the details of a very few of the cases reveals that those guidance counselors and principals involved believed that sometimes work is a legimate reason whereas other times it is rationalization.

# CHAPTER V

## GUIDANCE COUNSELORS' OPINIONS

In addition to the direct questionnaire given to the high scoring students to discover why they did not attend the seminar, the guidance counselors wrote a brief sentence or phrase stating why they thought each student did not attend the seminar. This request to guidance counselors comprises Appendix A.

Some responses of the guidance counselors for some students were quite complete. For example:

> Did not take qualifying test last year. His parents were annoyed. A place was created for him and he declined. Perhaps next year.
>
> On the basis of the data we have, Mary's grade average and test data were not high enough for her to be considered. In the area on the STEP, which she scored highest in, she is having the most trouble at present.
>
> This girl has the third best average in the senior class but she was not asked as she said she was interested in only one thing and that was marriage. She has not applied to a college and has shown no interest in doing so.
>
> Did not qualify. Took test last spring. Very able in math and science but very poor in language or verbal.

Other responses were very brief, as the following:

> Not interested.
>
> I. Q. - Not recommended.
>
> Grade average too low.
>
> Not ambitious.
>
> Too busy.
>
> Logic class
>
> Works on Saturday. Did not want to attend.
>
> Now in program.

Not considered in able and ambitious category.

Too many other responsibilities.

Conversations with counselors from the participating schools revealed that various objective criteria were rather strictly held to by some schools and were quite definitely ignored by other schools. Specifically, students recommended by the participating schools were to have tested I. Q.'s of 120 or above. Some guidance counselors adhered to this policy rigidly, not allowing those with I. Q.'s of 119 to come to Oneonta to take the special admissions tests. In other schools, students scoring around 110 were sent for testing, and in some cases these students scored well on the tests, and were admitted to the Saturday seminars. This policy is undoubtedly at least part of the reason that guidance counselors mentioned "I. Q." as the reason some students did not attend the Saturday seminars.

An attempt was made to categorize the responses of the guidance counselors. This summary of the most frequent responses is presented in Table XXXXII. According to Table XXXXII, I. Q. was mentioned 47 times and poor achievement 89 times. Other numbers in the column can be read similarly.

In making the tabulation for Table XXXXII, each response was only put in one category. Thus, if a guidance counselor gave two independent reasons only the first reason was tabulated. Thus, for 89 students, guidance counselors' first responses, or only responses, implied poor achievement. Poor achievement included responses like: "average or poor class work," "low marks," and "poor achievement".

TABLE XXXXII. REASONS GUIDANCE COUNSELORS BELIEVE HIGH SCORING STUDENTS DID NOT ATTEND THE SATURDAY SEMINARS.

| REASON | Number of Students |
|---|---|
| Miscellaneous | 118 |
| Poor Achievement | 89 |
| I. Q. Average or Low | 47 |
| Able - Not Ambitious | 43 |
| Chooses Or Needs To Work | 23 |
| Not Interested | 23 |
| New To School | 22 |
| Busy At Home | 16 |
| Ambitious - Not Able | 14 |
| Attends Local Class | 8 |
| Attending Seminar Now (2nd Sem.) | 8 |
| Asked But Did Not Want To Attend | 7 |
| Tested By Program But Not Accepted | 7 |
| Attended For Short Time And Dropped | 5 |
| Left School | 4 |
| Recommended, But Did Not Qualify In Chosen Area | 2 |
| Transportation | 2 |
| Poor School Attendance | 2 |
| " ? " | 2 |
| Attended Last Year | 2 |
| May Be Possible Student Next Year | 2 |
| Able In Math And Science; Poor In Language And Verbal | 1 |
| Failed All Regents In Academic Area | 1 |

The ambitious, but not able, category, included responses like the following:

"Joe works quite hard at certain things, but we never felt he was classified as high ability."

The able, but not ambitious, category, included these types of responses.

"Able, but at this point not ambitious."

"Not ambitious, but a capable student."

The miscellaneous category, most of the time, included responses that were difficult to interpret, and was included for that reason, rather than because there were many other types of responses. The miscellaneous category included responses as the following:

"Not considered as able as necessary."

"Not asked - some question if he meets qualifications of A and A."

"Not tested in Oneonta last year. Did not meet minimum general requirements."

"Did not seem eligible according to our test results."

Most of the students in the "new to school" category were students from only one of the participating schools. A high school, not one of the participating high schools, closed. Many of the students from the closed high school transferred to one of the 24 participating schools. These students were therefore not evaluated in time to be given the opportunity to attend the seminars.

Before the final categories for Table XXXXII were decided on, interviews were held with selected guidance counselors in an attempt to understand the meaning of their responses. The unstructured interviews left the interviewer with the following subjective opinions:

> In a very few cases, guidance counselors overlooked, according to their criteria, some students in making recommendations. This was particularly true where the guidance counselor was new to the

school or where a new student transferred into the high school.

Some guidance counselors decided on their own screening procedures, and placed a very heavy emphasis, if not the entire emphasis, on school marks in making their decisions regarding who should be allowed to take the entrance test.

Still other counselors took the same license, and used as their major criteria scores on regents exams.

There was lack of agreement among the counselors as to the desirable characteristics of the STEP for identification or other purposes. Some thought it indicated achievement quite accurately and others believed strongly that theses tests did not indicate how much students knew, and could use, in the particular subject matter area. These views were made known when the discussion centered around those students who scored as high as or higher than the lowest person in the seminar, but were not attending the seminars. Some guidance counselors and principals were prone to defend their decisions saying: "Look at his marks in high school," or, "Look at his regents scores." Others were less certain about their decision responding: "Maybe we should have let him take the test. We did this year." By "this year," they were referring to the June 1961, test for those interested in participating in the seminars in 1961 - 62.

Approximately 200 students took the entrance exams given in June, 1960. In June, 1961, over 350 students took the exams to qualify for the same five seminars. The hypotheses suggested, is that counselors and principals decided to send some students that they previously might not have considered able and ambitious.

## SUMMARY AND CONCLUSIONS

In order to discover why high scoring juniors and seniors do not attend the seminars, the guidance counselors were asked, "Would you please explain why you believe they are not in the seminars." The guidance counselor was to give a separate reason for each student in his school. In some cases these responses were quite complete and clear. In other cases these responses were brief and vague.

An attempt was made to categorize the responses. Poor achievement was the single most frequent reason given to why these high scoring juniors and seniors do not attend the seminars. About one fourth of the responses were placed in the miscellaneous category primarily because the explanation was not clear and would allow for considerable subjective judgement in categorizing.

Subjective impressions, as a result of the interviews with selected guidance counselors, led the interviewer to believe that different schools used various criteria as a basis for selecting able and ambitious students. That is, some schools did not allow students with I. Q. 's below 120 to take the entrance tests, while other schools overlooked this suggested regulation. Furthermore, some guidance counselors used other test results to select the students that they sent to Oneonta for testing , while other guidance personnel used marks in high school and grades on the regents examinations.

The considerably higher number of students sent to take the examinations in June, 1961, as compared with the number sent in June, 1960, leads to the hypothesis that some counselors and principals have decided to send some kinds of students for testing that they previously might not have considered able and ambitious.

# CHAPTER VI

# ACADEMIC SUCCESS OF SEMINAR STUDENTS IN COLLEGE

The second major question to be answered by the design was, "What happens to these seminar students academically when they leave high school and go on to college?" According to the design, grades in college were to be the criterion used as evidence of academic success or failure. It was decided operationally that the most valid information would be that obtained from transcripts from the colleges. At a meeting of the guidance counselors from the participating school, it was further decided that the best results, in terms of rapid responses from the college registrars, would be obtained if the letters to the colleges came from the guidance counselors of the participating schools rather than from the central research office. However, since secretarial help was at a premium in many of the schools, it was further decided that the letters would be typed on the school stationary by the central office. Appendix OO comprises the instructions that went to each school regarding these letters to registrars. Following these instructions, the schools sent their letter head stationary and envelopes to the research office at Oneonta. The letters were then typed, copies of the letters were kept in the research office files, and the original and a carbon were sent to the guidance counselors for their signatures and for mailing. In a very few cases the schools elected to type their own letters and sent carbons to the research office in accordance with the alternative instructions. The first letters sent to the college registrars (Type A) followed the form shown in Appendix PP. Second letters, (Type B) where necessary, followed the type shown in Appendix QQ. Most colleges promptly sent the transcripts to the guidance counselors, who promptly returned them to the college. When the information from the transcripts had been tabulated, the transcripts were returned to the high school for use in their follow up studies or as they saw fit. Appendix RR is the memo that accompanied the transcripts.

Two colleges requested a $1.00 fee. In one case, where only one student was involved, the $1.00 was sent. In another case where five students were involved, a special request from the central research office, to the President of the college involved, apparently led to the release of the transcripts without charge.

Another college registrar sent transcripts to some guidance counselors, and told others that transcripts could not be released without the student's permission. Contact with the college President led to release of all transcripts. Thus, of the 97 transcripts requested from 44 colleges, 94 were received as of June 30.

In October, 1958, when the seminar programs first began, there were only seminars in mathematics and natural sciences. The total number of students enrolled was 35. In January, 1959, a third seminar was begun in humanities. Beginning in October, 1959, a fourth seminar was added in humanities. The two humanities seminars for the fall semester of the academic year 1959-60, were referred to as Humanities I and Humanities II. For the most part, the juniors attended Humanities I and the seniors attended Humanities II. During the spring semester of 1960, Humanities I became Humanities II, and Humanities II became Humanities III. In February of 1960, a fifth seminar in social studies was added.

Table XXXXIII is a summary of the number of students attending the various seminars each year since they began. According to Table XXXXIII, in the fall of 1958, eleven boys and six girls attended the mathematics seminar while thirteen boys and five girls attended the science seminar. Similarly, in the spring of 1959, twelve boys and eight girls attended the science seminars. Most students attended the seminars for the academic year. However, some students dropped out the end of the first semester and were replaced by other interested high-scoring students. A few students dropped out during the semester and were similarly replaced. The numbers in Table XXXXIII represent the number of students enrolled and in attendance for the first four meetings of the seminars. Thus, these numbers may include, in some instances, students who dropped out of the seminars after they had been in session about one month.

TABLE XXXXIII. NUMBER OF STUDENTS ATTENDING THE SEMINARS.

| | Semester and Sex of Participants | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1958-59 | | | | 1959-60 | | | | 1960-61 | | | |
| | Fall | | Spring | | Fall | | Spring | | Fall | | Spring | |
| | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls |
| Math. | 11 | 6 | 11 | 8 | 14 | 6 | 14 | 7 | 10 | 8 | 10 | 9 |
| Science | 13 | 5 | 17 | 8 | 13 | 6 | 13 | 6 | 17 | 3 | 17 | 3 |
| Humanities | 0 | 0 | 3 | 16 | 15 | 35 | 15 | 36 | 8 | 42 | 9 | 37 |
| Social Studies | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 14 | 11 | 13 | 12 | 12 |
| Total | 24 | 11 | 31 | 32 | 52 | 47 | 53 | 63 | 46 | 66 | 48 | 60 |

From the tabulations in Table XXXXIII the total number of different students attending the seminars cannot be calculated as some students attended two or more seminars. In the first seminars, begun in October 1958, sophomores, juniors, and seniors were admitted. Later this policy was changed so that only juniors and seniors were eligible for the seminars. This latter policy has continued.

According to Table XXXXIII, 24 boys and 11 girls attended the seminars in the fall of 1958-59. Similarly, in the spring of 1961, 50 boys and 63 girls attended the seminars.

Table XXXXIV is a summary of the seminars attended by those students attending two seminars. The combination of courses most frequently attended, according to this summary, was mathematics and science, humanities and social studies, and science and humanities. Thirteen people attended both a mathematics and a science seminar and 13 other students attended both a social studies and a humanities seminar. Eight people attended both a science and a humanities seminar. In addition to the two different seminars attended by students, as presented in Table XXXXIV, some students repeated seminars. Eight people, who attended the humanities seminar in 1958-59, again attended a humanities seminar in 1959-60. One person who attended a humanities seminar in 1959-60, again attended a humanities seminar in 1960-61. One student, who attended a mathematics seminar in 1958-59, again attended a mathematics seminar in 1959-60. Four people, who attended a mathematics seminar in 1958-59, again attended a mathematics seminar, two in 1959-60, and two in 1960-61.

According to the records, four of the participants attended three seminars. One girl attended two humanities seminars, first for ½ year and then for a year, and then attended a math seminar in 1960-61. Two boys attended a science seminar in 1958-59, a math seminar in 1959-60, and a science seminar in 1960-61. Another girl attended a science seminar in 1958-59, a humanities seminar in 1959-60, and a math seminar in 1960-61.

TABLE XXXXIV. COMBINATIONS OF DIFFERENT SEMINARS ATTENDED BY THOSE STUDENTS ATTENDING TWO SEMINARS.

| Math. Science | Math. Humanities | Math. Social Studies | Science Humanities | Science Social Studies | Humanities Social Studies |
|---|---|---|---|---|---|
| 13 | 8 | 8 | 12 | 3 | 13 |

The number of different students who attended the seminars is presented in Table XXXXV. Those who attended two different seminars were counted only in the first seminar attended in tabulating the information for Table III. One hundred-fifty boys and girls from the 24 participating schools attended the seminars up through 1959-60.

TABLE XXXXV. NUMBER OF DIFFERENT STUDENTS WHO ATTENDED THE SEMINARS 1958-59, 1959-60

| SEMINARS | | | | | | | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|
| Math | | Science | | Humanities | | Social Studies | | | |
| Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls |
| 18<br>(17) | 15<br>(14) | 27<br>(25) | 10<br>( 9) | 15<br>( 5) | 40<br>(23) | 11<br>( 5) | 14<br>( 4) | 71<br>(52) | 79<br>(49) |

The numbers in parentheses in Table XXXXV represent the number who graduated from high school before the academic year 1960-61. Those who were juniors in 1959-60 were excluded in determining this number. Therefore, these numbers represent those who were eligible to attend some college. Hence, 52 boys and 49 girls comprise the potential group that could be followed in answering the question "What happens to these students academically when they go on to college?"

Table XXXXVI is a summary of the number and per cent of seminar participants who attended college. Seventeen of the boys and thirteen of the girls who attended math seminars went on to college. Similarly, twenty-five of the boys and nine of the girls, who attended science seminars went on to college.

TABLE XXXXVI. NUMBER AND PER CENT OF SEMINAR STUDENTS WHO WENT ON TO COLLEGE.

| | SEMINARS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Math | | Science | | Humanities | | Social Studies | | Total | |
| | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls |
| Number | 17 | 13 | 25 | 9 | 5 | 20 | 4 | 4 | 51 | 46 |
| Per Cent | 100 | 93 | 100 | 100 | 100 | 89 | 80 | 100 | 98 | 94 |

By using the data presented in Table XXXXV and Table XXXXVI, the per cents in Table XXXXVI can be determined. That is, 25 boys, who attended the science seminars went on to college. Of the 28 boys who attended the science seminars through 1959-60, 25 had graduated from high school by June, 1960. The remaining three boys were juniors. Therefore, 100 per cent of all boys who attended the science seminars and graduated from high school went on to college. Other per cents can be read similarly from Table XXXXVI.

By totaling the numbers in Table XXXXVI and comparing this with the total in Table XXXXV, it can be observed that 94 of 101 seminar students went on to college. Fifty-one of the 52 boys who attended seminars went on to college when they graduated from high school, and 46 of the 49 girls went on to college. This number then, 97, represents the group that went on to college and is the group to be followed in answering the question: "What happens to these students academically when they go on to college?"

In Table XXXXVII the colleges and universities attended by the seminar participants, who have graduated from high school, are listed in alphabetical order. The numbers in the last column following the names of the colleges represents the number of students that attended each specific school.

TABLE XXXXVII. COLLEGES ATTENDED BY SEMINAR PARTICIPANTS

| College or University | No. of Seminar Participants | | | | |
|---|---|---|---|---|---|
| | Science | Math. | Soc. St. | Hum. | Total |
| State University of New York College of Education Albany | 1 | 1 | 1 | 2 | 5 |
| " " " Buffalo | - | - | - | 1 | 1 |
| " " " Cortland | - | 1 | - | - | 1 |
| " " " Geneseo | - | - | - | 1 | 1 |
| " " " Harpur College | - | - | - | 2 | 2 |
| " " " Oneonta | 6 | 5 | 4 | 4 | 17 |
| " " " Alfred Univ. | 2 | - | - | - | 2 |
| SUNY, Agr. & Tech. Inst., Cobleskill | - | - | - | 2 | 2 |
| " " " Delhi | - | 2 | - | 3 | 5 |
| " " " Morrisville | - | 1 | - | - | 1 |
| Albany Pharmacy School, Albany, N.Y. | - | - | 1 | - | 1 |
| Amherst College, Amherst, Mass. | 1 | - | - | - | 1 |
| Chicago, Univ. of | - | - | - | 1 | 1 |
| Clarkson College | 1 | 2 | - | - | 3 |
| Cochran School of Nursing, St. John's Hosp. | - | 1 | - | - | 1 |
| Cooper Union | 1 | - | - | - | 1 |
| Cornell Univ. | 3 | 4 | - | - | 5 |
| Furman Univ. | 1 | - | - | - | 1 |
| Hamilton College | - | 1 | - | - | 1 |
| Hartwick College | 1 | 2 | 1 | 5 | 9 |
| Harvard College | - | 1 | - | - | 1 |
| Ithaca | 1 | - | - | - | 1 |

TABLE XXXXVII (cont.)

| College or University | Science | Math. | Soc. St. | Hum. | Total |
|---|---|---|---|---|---|
| Keuka College | - | 3 | - | 1 | 3 |
| Louisville, Univ. of | 1 | 1 | - | - | 1 |
| Mass. Institute of Technology | 2 | 1 | - | - | 2 |
| Oregon State College | 1 | 1 | - | - | 1 |
| Pittsburgh, Univ. of | 1 | - | - | - | 1 |
| Poughkeepsie Community College (Vassar Brothers Hosp., Poughkeepsie) | 1 | 1 | - | - | 1 |
| Pratt Institute | 1 | - | - | - | 1 |
| Renselaer Polytechnic Institute | 2 | 1 | - | 1 | 3 |
| Rochester, Univ. of | 2 | 1 | - | - | 2 |
| Rollins College | 1 | 1 | - | - | 1 |
| Russell Sage College | - | - | 1 | - | 1 |
| St. Lawrence Univ. | 1 | - | - | - | 1 |
| St. Luke's Hosp., New York City | - | - | - | 1 | 1 |
| St. Bonaventure Univ. | - | 1 | - | - | 1 |
| Salem College, Salem, W. Va. | - | 1 | - | - | 1 |
| Syracuse Univ. | 2 | 1 | - | 3 | 6 |
| Tri-State College, Angola, Indiana | 1 | - | - | - | 1 |
| Union College, Schenectady, N.Y. | 1 | 1 | - | - | 1 |
| U. S. Naval Academy | 1 | - | - | - | 1 |
| Utica College | 1 | - | - | 2 | 2 |
| Virginia, Univ. of | 1 | - | - | - | 1 |
| Wanakena Ranger School (N.Y.S. Ranger School). Wanakena | 1 | - | - | - | 1 |
| Totals (44 Colleges) | 39 | 35 | 8 | 30 | 97 |

As might be expected from geographic proximity, the highest number of seminar students attending any one college attend State University College of Education at Oneonta. Similarly, the second highest number of seminar students attending one college, attend Hartwick College in Oneonta. Syracuse University was attended third most frequently and Delhi Agricultural and Technical Institute, Cornell University and Albany SUCE were tied for fourth.

Geographically, seminar students attended colleges as far west as Oregon, as far east as Cambridge, Massachusetts, and as far south as Florida.

The data in Table XXXXVII further indicates the seminars that the students attended. For example, four students attending SUCE at Oneonta were in the Social Studies Seminar, five were in the Mathematics Seminar, four were in the Humanities Seminar and six were in the Science Seminar. Since some students attended more than one seminar, as was shown in Table XXXXIV, the sums of the first four columns in Table XXXXVII necessarily are sometimes greater than the total in the fifth column. For example, two of the students attending SUCE at Oneonta, attended two different seminars. One student attended a Science and a Mathematics Seminar, the other attended a Science and a Humanities Seminar. Students were counted twice in the seminar columns in Table XXXXVII. However, they were only counted once when the totals for the colleges were tabulated.

Of the 46 girls and 51 boys who attended colleges, transcripts were received on 45 girls and 49 boys. The grade point averages were then determined whenever possible, for each student. The summary of these grade point averages is presented in Table VI. Grade point averages could not be determined in several cases for various reasons. For example, in one school some courses were one semester courses and others were two semester courses. In the latter instances, no grades were given for the freshmen students as the year was not completed at the time the transcript was requested. The partial information, that is first semester course grades, was not included in figuring the grade point averages presented in Table XXXXVIII since such figures would only represent a partial grade point average. The grade point average was determined for all students as follows: A= 4 points, per credit hour; B=3 points, per credit hour; C = 2 points, per credit hour; D = 1 point per credit hour; E or F = no points per credit hour.

XXXXVIII. COLLEGE GRADE POINT AVERAGES OF SEMINAR STUDENTS

| | GRADE POINT AVERAGES | | |
|---|---|---|---|
| | Girls | Boys | Both Sexes |
| Mathematics | (8)* 2.58 | (11) 2.57 | (19) 2.58 |
| Science | (8 ) 2.80 | (13) 2.48 | (21) 2.64 |
| Humanities | (17) 2.85 | (5 ) 2.81 | (22) 2.83 |
| Social Studies | ( 3) 2.15 | (3 ) 2.68 | ( 6) 2.42 |
| All Seminars Combined | (36) 2.60 | (32) 2.64 | (68) 2.62 |

*The number in parentheses represents the number of students involved.

According to the data presented in Table XXXXVIII, the mean grade point average of 8 girls who attended the Mathematics Seminars was 2.58. The mean grade point average for 11 boys who attended the Mathematics Seminars was 2.57. Other numbers in the table can be read similarly.

Of those 97 seminar participants who started college, 93 or 96 per cent were still in attendance. Those four not in attendance were not attending for the following reasons:

> One girl got married. Apparently at the time she withdrew from college she was in good standing academically, although a transcript has not been received to date.
>
> Another girl withdrew during her third semester - reason unknown. Her grade point average at the time of withdrawal was 2.12. Transcript read "The student is entitled to honorable dismissal".
>
> A boy in a Mathematics and Science program was dropped. His grade point average was .75. The transcript read "Ineligible to continue for reasons of Scholarship."
>
> A second boy withdrew at the end of one semester. His grade point average for the three semesters in attendance was 2.19. The reason for his withdrawal is unknown.

The individual grade point averages for those students currently attending college are presented in Table XXXXIX. The scores organized according to seminar and are in order from highest to lowest. The asterisk next to the score indicates a girls' score. Those scores with no asterisks represent boys' score.

TABLE XXXXIX. INDIVIDUAL GRADE POINT AVERAGES.

| SEMINARS | | | | | | |
|---|---|---|---|---|---|---|
| Mathematics | | Science | | Humanities | | Social Studies |
| 3.82 | 2.37* | 3.35 | 2.44 | 3.82 | 2.75* | 3.62 |
| 3.23* | 2.35 | 3.29* | 2.18 | 3.81* | 2.43* | 2.69* |
| 3.18 | 2.31 | 3.28 | 2.16* | 3.65* | 2.41 | 2.50 |
| 3.00* | 2.17 | 3.25 | 2.12* | 3.61* | 2.27* | 2.19* |
| 2.93* | 2.09* | 3.22* | 2.10 | 3.61* | 2.20 | 1.92 |
| 2.79 | 1.69* | 3.20* | 2.00 | 3.55 | 2.12* | 1.56* |
| 2.68* | 1.63 | 2.95* | 1.82 | 3.50* | 2.07 | |
| 2.63* | | 2.91* | 1.77 | 3.20* | 1.94* | |
| 2.56 | | 2.88 | 1.75 | 3.07* | 1.92* | |
| 2.50 | | 2.84 | | 3.07* | 1.65* | |
| 2.50 | | 2.60 | | 2.81* | | |
| 2.47 | | 2.56* | | 2.80* | | |
| | n =19 | | n = 21 | | n = 22 | n = 6 |

*Girls

The range of scores for Mathematics Seminar participants was from 1.63 to 3.82, for Science participants from 1.75 to 3.35, for Humanities participants from 1.65 to 3.82, and for Social Studies participants from 1.56 to 3.62. Two mathematics participants, three who participated in Science seminars, three who participated in Humanities seminars, and two of the participants of the Social Studies seminars have grade point averages below a 2.00 point or C average.

The grade point averages for eight of these ten below average students represents their average at the end of the first semester of their freshman year. For one other student it represents the first two quarters of her freshman year, and for the remaining student it represents the first semester of his freshman year at two different colleges. This student took the first semester of his freshman year at one college and failed all but one subject. He took many of these courses over at another college and obtained a C average.

The grade point averages presented in Tables XXXXVIII and XXXXIX are the grade point averages of sixty-eight of ninety-seven seminar students who have gone on to college. The analysis of the remaining twenty-six transcripts, transcripts from which comparable grade point averages could not be determined, is presented in Table L.

In some cases it was easy to judge whether the student was doing satisfactory work. For example, some schools gave only "passed" or "failed". This response could not conveniently be assigned a grade point average, but it was easy to determine for Table L whether the students work was satisfactory. Another school used the following evaluative terms "above average" and "excellent" to describe a student's progress. Four schools used numerical scores.

In two cases the information given on the transcript was of such a nature that an interpretation could not readily be made.

TABLE L SUCCESS OF SEMINAR STUDENTS IN COLLEGE

| | Category | Number of Students |
|---|---|---|
| I | Transcript indicates satisfactory work in all areas in which an evaluation was available. | 16 |
| II | Transcript indicates satisfactory work in all but one area in which an evaluation was available. | 3 |
| III | Transcript indicates unsatisfactory work in two or more areas in which an evaluation was available. | 5 |
| IV | Transcript could not be interpreted to indicate the above. | 2 |

The data in Table L indicates that sixteen students were doing satisfactory work, three students were doing satisfactory work in all but one subject, five students were doing unsatisfactory work in two or more areas and that the transcripts of two students were such that an objective evaluation of their success or failure could not be made.

The transcripts were further examined to determine if certain related speculative hypotheses such as the following might be true: (1) Students choose electives in the areas corresponding to the seminars that they attended. (2) Students plan to major in areas corresponding to the seminars that they attended. (3) Students get higher grades in areas corresponding to the seminars that they have attended. However, the data, for the most part, were not sufficient to answer the above hypotheses in an objective quantitative manner for one reason or another.

Hypotheses one and two could not be answered because the students have only been in college, at the most, two years and the information in the transcripts included, at the most, one and one half years of college. During the first year and one half of college, in many colleges all students take relatively the same course work. Furthermore, hypothesis one could not be answered because electives were generally not designated as such on the transcripts. Another reason hypothesis two could not be answered was the inconsistency in reporting the student's major field and the variance in terminology. That is, some schools did not indicate the student's major area...in some of those schools perhaps the student had not yet decided. In addition, it appeared from the transcripts that different colleges used different terms to indicate the same course sequency pattern.

A beginning was made in organizing the data in preparation for testing the third hypotheses. However, it soon became apparent that this could not be accomplished in time to be included in this report. Furthermore, since at the most, the information included in the transcript covered only two years at college and in most cases one and one half years or less, it was thought advisable to discontinue the testing of this hypotheses until more inclusive data could be obtained.

## SUMMARY AND CONCLUSIONS

The second major question to be answered by the design was, "What happens to those seminar students academically when they leave high school and go on to college?"

Of forty-nine girls and fifty-two boys who have attended the seminars in the academic years 1958-59 and 1959-60 and hence have graduated from high school by June 1960, forty-six, or 94 per cent of the girls and 51, or 98 per cent of the boys have gone on to college.

Transcripts for assessing academic success were received on 45 of the 46 girls and 49 of the 51 boys. Sixty-eight of these transcripts or 72 per cent could be analyzed for grade point average. The mean grade point average of mathematics participants was 2.58; of the science participants, 2.64; of the humanities participants, 2.83; and of social studies participants, 2.42. Ten of the seminar participants had below a 2.00 average. The grade point average of eight of these students represents their average at the end of the first semester of their freshman year only.

Of those 97 seminar participants who started college, 93, or 96 per cent were still in attendance.

A further analysis of the remaining transcripts on which a grade point average could not be determined indicated that sixteen were doing satisfactory work in all subjects, three were doing satisfactory work in all but one subject, and five were doing unsatisfactory work in two or more subjects. The transcripts on two students could not be interpreted to indicate success or lack of success without further information.

Fifty-eight of sixty-eight seminar students or 82 per cent of those on which grade point averages could be determined are known to have grade point averages above 2.00 in college. Of the remaining 26, sixteen or 62 per cent are known to be doing satisfactory work in all areas in which an evaluation was available.

## APPENDIX A

## SEQUENTIAL TESTS OF EDUCATIONAL PROGRESS

________Social Studies Test Booklets, Form 2A

________Mathematics Test Booklets, Form 2A

________Science Test Booklets, Form 2A

________Answer Sheets (Appropriate for any of the above tests)

________Directions for Administering and Scoring

### Directions

1. Please administer the following three tests to all juniors and seniors in the high school who have not taken the test as part of their admittance to the Able and Ambitious Seminar Program.

2. Use the answer sheets provided so that the test booklets may be reused.

3. Make out a separate class roster for juniors and seniors. The scores will be put on this roster and it will be returned to you.

4. Please put an asterisk next to all boys on the roster. (Upon occasion it is difficult to distinguish sex by the name only.)

5. Return all materials immediately to:

Dr. Reuben R. Rusch
Able and Ambitious Seminar
Program
State University College
of Education
Oneonta, New York

According to our records

the number of juniors in your school ______

" " " seniors " " " ______

## APPENDIX B

To: Area School Representatives

From: Reuben R. Rusch

Re: Recent STEP Test Participants

Enclosed is a roster of the junior and senior students from your school who recently took the STEP Tests.

We have added the converted scores to your roster and have made a copy of the roster and the scores for our use. This information and its analysis will be kept confidential and when appearing in reports will be coded. However, you might find uses for the results for students in your school. Thus, each school is being sent the results for that school only. We hope that this information is arriving in time to be of some value to you.

Enclosed also is a copy of three tables for changing the converted scores in mathematics, science, and social studies into a percentile band. You may find percentiles of considerable help for certain uses that you may wish to make of these results. Further information concerning the meanings of these scores may be gleaned from the Manuals for Interpreting Scores which you can get by writing the Cooperative Test Division, Educational Testing Service, 20 Nassau Street, Princeton, New Jersey. We have only one copy of these manuals and do not have funds to provide copies for the schools.

ENCS.
101818

## APPENDIX C

### QUESTIONNAIRE FOR HIGH SCHOOL GIRLS ONLY

Date ______________

Name ______________________ ________________ __________
last first initial

High School ________________________________________

Grade in high school (check one) ☐ Junior ☐ Senior

Do you plan to go to college? (check one) ☐ yes ☐ no

Name the most popular boy in your high school. ________________________

Name the most popular girl in your high school. ________________________

If you had your choice, how would you most like to be remembered in school? (Number in order of preference, 1 for first choice, 2 for second choice, 3 for third choice)

___________ as most popular
___________ as a leader in extra-curricular activities
___________ as a brilliant student

Name the best athlete in your school, the best student, and the girl most popular with the boys.

Best student ____________________________________
Best athlete ____________________________________
Girl most popular with the boys ____________________

Who are the members of the leading crowd in your high school? (please list)

What does it take to get to be a member of the leading crowd?

What are your favorite leisure time activities?

Do your parents try to encourage you to do better in your school work? (check one)

☐ yes ☐ no

Do your parents want you to go to college? (check one)

☐ yes ☐ no ☐ I don't know

"Mary was doing well in science class because she had a hobby of collecting and identifying insects. One day her science instructor asked Mary if she would act as the assistant in the class. Mary didn't know whether this was an honor to be proud of or whether she would be the 'teacher's pet.'" How [illegible]

## APPENDIX C (CONTINUED)

Page 2

would you feel --that it would be something to be proud of, or wouldn't it matter?

something to be proud of ☐
something I wouldn't care for ☐
I'd have mixed feelings ☐

Now suppose you decided to agree to be the assistant in science. What would your friends think when they found out about it?

They would envy me and look up to me. ☐
They would kid me about it, but would still envy me. ☐
They would look down on me. ☐
They wouldn't care one way or the other. ☐

Jane's hobby was sewing. She sewed many of her own clothes and won prizes at the county fair. Because of this her Home Economics teacher singled her out as her special assistant. Jane didn't know what to do since she had not use for girls who hung around the teacher. If you were in Jane's place, what would you do?

I would agree to be an assistant. ☐
I wouldn't agree to be an assistant. ☐
I am not sure. ☐

If you did become the assistant in the home economics class, would your friends look up to you for it or would they look down on you?

They would envy me and look up to me. ☐
They would kid me about it, but would still envy me. ☐
They would look down on me. ☐
They wouldn't care one way or the other. ☐

Is your school work interesting? (check appropriate term)

Always Usually Sometimes Seldom Never

NOTE: This questionnaire was presented to the students on 8½ X 13 paper, thus allowing room for the answers after each question.

## APPENDIX D

## QUESTIONNAIRE FOR HIGH SCHOOL BOYS ONLY

Date ______________

Name ________________ ________________ __________
last first initial

High School ______________________________________

Grade in high school (check one) ☐ Junior ☐ Senior

Do you plan to go to college? (check one) ☐ yes ☐ no

Name the most popular girl in your high school. ____________________

Name the most popular boy in your high school. ____________________

If you had your choice, how would you most like to be remembered in school? (Number in order of preference, 1 for first choice, 2 for second choice, 3 for third choice)

__________as most popular
__________as an athletic star
__________as a brilliant student

Name the best athlete in your school, the best student, and the boy most popular with the girls.

Best student ____________________________
Best athlete ____________________________
Boy most popular with the girls ____________________________

Who are the members of the leading crowd in your high school? (please list)

What does it take to get to be a member of the leading crowd?

What are your favorite leisure time activities?

Do your parents try to encourage you to do better in your school work? (check one)

☐ yes ☐ no

Do your parents want you to go to college? (check one)

☐ yes ☐ no ☐ I don't know

"Bill was doing well in science class because he had a hobby of collecting and identifying insects. One day his science instructor asked Bill if he would act as the assistant in the class. Bill didn't know whether this was an honor to be proud of, or whether he would be the 'teacher's pet'." How

## APPENDIX D (CONTINUED)

Page 2

would you feel - that it would be something to be proud of, or wouldn't it matter?

something to be proud of ☐
something I wouldn't care for ☐
I'd have mixed feelings ☐

Now suppose you decided to agree to be the assistant in science. What would your friends think when they found out about it?

They would envy me and look up to me. ☐
They would kid me about it, but would still envy me. ☐
They would look down on me. ☐
They wouldn't care one way or the other. ☐

"Tom had always like to fool around with wood and built things and was very good at it. Once he built a boat. Because of this, the shop teacher singled him out to act as his special assistant. Tom didn't know what to do, since he had not use for boys who hung around the teacher." If you were in Tom's place , what would you do?

I would agree to be an assistant. ☐
I wouldn't agree to be an assistant. ☐
I am not sure. ☐

If you did become the assistant in the shop class, would your friends look up to you for it, or would they look down on you?

They would envy me and look up to me. ☐
They would kid me about it, but would still envy me. ☐
They would look down on me. ☐
They wouldn't care one way or the other. ☐

Is your school work interesting? (check appropriate term)

/ Always / Usually / Sometimes / Seldom / Never

NOTE: This questionnaire was presented to the students on 8½ X 13 paper, thus allowing room for the answers after each question.

# APPENDIX E

January 3, 1961

To: Area School Representatives

From: Reuben R. Rusch

Re: Questionnaire for Juniors and Seniors

Enclosed are two questionnaires that are intended for all juniors and seniors in your high school. There is one questionnaire intended for junior and senior girls and a second questionnaire for junior and senior boys. We would like to have the results of the questionnaire returned to us by January 19, if possible, and definitely before February 1.

As you know from our previous discussions, one of the questions to be answered is: "Why don't some able students attend the seminars?" We now know from the STEP tests administered in the fall that there are some equally able students who are not presently attending the seminars. James S. Coleman has hypothesized and demonstrated that answers to these questions can be found in analyzing adolescent values. This questionnaire is partly designed to follow his hypotheses, findings, and model. Later, we believe, it will be best to ask the able, nonparticipating students this question in a more direct manner.

We have the list of juniors and seniors that you gave us when the STEP tests were administered in your school. If this list has been changed, would you please notify us of the changes when you return the results of this questionnaire.

Most of the items on this questionnaire will probably not lead to questions that demand an explanation. In some cases sophomores and perhaps even freshmen may be considered by these juniors and seniors to be the leaders. We do not anticipate that this will confound our tabulation of the results however.

You may wish to administer the questionnaires separately to the boys and girls. Please use whatever procedure will give valid results and be convenient for you. Naturally we hope that you will create the best possible atmosphere.

RR:jd
010327

# APPENDIX F

## PLANS FOR COLLEGE: SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| POPULATION AND PERCENT | | | | t |
|---|---|---|---|---|
| Seminar Boys and Girls | 98.2 | High Scoring Non-Seminar Boys and Girls | 79.1 | 7.80 |
| Seminar Boys and Girls | 98.2 | All Other Boys and Girls | 50.0 | 26.05 |
| Seminar Girls | 96.9 | Seminar Boys | 100.0 | 1.44 |
| Seminar Girls | 96.9 | High Scoring Non-Seminar Girls | 82.4 | 3.72 |
| Seminar Girls | 96.9 | All Other Girls | 56.1 | 13.45 |
| Seminar Boys | 100.0 | High Scoring Non-Seminar Boys | 77.2 | 8.35 |
| Seminar Boys | 100.0 | All Other Boys | 41.5 | 22.41 |

# APPENDIX G

## MOST POPULAR BOY IN HIGH SCHOOL (GIRLS' OPINIONS) SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| CHOICES | POPULATION AND PER CENT | | | | t |
|---|---|---|---|---|---|
| Choosing Seminar Boys | Seminar Girls | 20.9 | High Scoring Non Seminar Girls | 16.7 | .66 |
| | Seminar Girls | 20.9 | All Other Girls | 12.7 | 2.22 |
| | High Scoring Non Seminar Girls | 16.7 | All Other Girls | 12.7 | 1.11 |
| Choosing High Scoring Non Seminar Boys | Seminar Girls | 53.2 | High Scoring Non Seminar Girls | 54.7 | .26 |
| | Seminar Girls | 53.2 | All Other Girls | 46.8 | .88 |
| Choosing All Other Boys | Seminar Girls | 25.8 | All Other Girls | 40.4 | 2.30 |
| | High Scoring Non Seminar Girls | 28.4 | All Other Girls | 40.4 | 2.61 |

# APPENDIX H

## MOST POPULAR BOY IN HIGH SCHOOL (GIRLS' OPINIONS)
## CHI SQUARE TEST

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | SEMINAR STUDENTS | HIGH SCORING NON-SEMINAR | OTHER | TOTAL |
| Seminar | 4<br>(7.[illegible]) | 33<br>(23.2) | 9<br>(15.7) | 46 |
| High Scoring Non-Seminar | 38<br>(38.2) | 139<br>(125.1) | 71<br>(84.7) | 248 |
| All Other | 46<br>(42.7) | 116<br>(139.7) | 115<br>(94.6) | 277 |
| Total | 88 | 288 | 195 | 571 |

$X^2 = 20.79$
d.f=4
Sign .01 level

# APPENDIX I

## MOST POPULAR BOY IN HIGH SCHOOL (BOYS' OPINIONS) SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| CHOICES | POPULATION AND PER CENTS | | | | t |
|---|---|---|---|---|---|
| Choosing Seminar Boys | Seminar Boys | 8.6 | High Scoring Non-Seminar Boys | 15.3 | 1.25 |
| | Seminar Boys | 8.6 | All Other Boys | 16.6 | 1.67 |
| Choosing High Scoring Non Seminar Boys | Seminar Boys | 71.7 | High Scoring Non-Seminar Boys | 56.0 | 2.16 |
| | Seminar Boys | 71.7 | All Other Boys | 41.8 | 4.11 |
| | High Scoring Non-Seminar Boys | 56.0 | All Other Boys | 41.8 | 3.18 |
| Choosing All Other Boys | Seminar Boys | 19.5 | High Scoring Non-Seminar Boys | 28.6 | 1.30 |
| | Seminar Boys | 19.5 | All Other Boys | 41.5 | 3.33 |
| | High Scoring Non-Seminar Boys | 28.6 | All Other Boys | 41.5 | 3.17 |

# APPENDIX J

## MOST POPULAR BOY IN HIGH SCHOOL (BOYS' OPINIONS)
## CHI SQUARE TEST

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | SEMINAR STUDENTS | HIGH SCORING NON-SEMINAR | OTHER | TOTAL |
| Seminar | 13<br>(8.9) | 33<br>(30.5) | 16<br>(22.6) | 62 |
| High Scoring Non-Seminar | 23<br>(19.8) | 75<br>(67.4) | 39<br>(49.8) | 137 |
| All Other | 54<br>(61.3) | 199<br>(209.1) | 172<br>(154.6) | 425 |
| Total | 90 | 307 | 227 | 624 |

$X^2$=11.26
d.f=4
sign level=.05

# APPENDIX K

## MOST POPULAR GIRL IN HIGH SCHOOL (BOYS' OPINIONS) SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| CHOICES | POPULATION AND PER CENTS | | | | t |
|---|---|---|---|---|---|
| Choosing Seminar Girls | Seminar Boys | 14.2 | High Scoring Non-Seminar Boys | 15.3 | .17 |
| | Seminar Boys | 14.2 | All Other Boys | 15.7 | .34 |
| | High Scoring Non-Seminar Boys | 15.3 | All Other Boys | 15.7 | .30 |
| Choosing High Scoring Non-Seminar Girls | Seminar Boys | 33.3 | High Scoring Non-Seminar Boys | 38.7 | .75 |
| | Seminar Boys | 33.3 | All Other Boys | 6.4 | .91 |
| | High Scoring Non-Seminar Boys | 38.7 | All Other Boys | 6.4 | 1.63 |
| Choosing All Other Girls | Seminar Boys | 52.3 | High Scoring Non-Seminar Boys | 45.9 | .71 |
| | Seminar Boys | 52.3 | All Other Boys | 7.8 | .73 |
| | High Scoring Non-Seminar Boys | 45.9 | All Other Boys | 7.8 | 2.67 |

# APPENDIX L

## MOST POPULAR GIRL IN HIGH SCHOOL (BOYS' OPINIONS) CHI SQUARE TEST

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | SEMINAR STUDENTS | HIGH SCORING NON-SEMINAR | OTHER | TOTAL |
| Seminar | 6<br>(6.5) | 14<br>(13.4) | 22<br>(22.1) | 42 |
| High Scoring Non-Seminar | 34<br>(34.3) | 86<br>(71.0) | 102<br>(116.7) | 222 |
| All Others | 44<br>(43.2) | 74<br>(89.6) | 162<br>(147.2) | 280 |
| Total | 84 | 174 | 286 | 544 |

$X^2=9.34$
d.f=4
sign level=.06

# APPENDIX M

## MOST POPULAR GIRL IN HIGH SCHOOL (GIRLS' OPINIONS)
## SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| CHOICES | POPULATION AND PER CENTS | | | | t |
|---|---|---|---|---|---|
| Choosing Seminar Girls | Seminar Girls | 20.3 | High Scoring Non-Seminar Girls | 8.8 | 2.10 |
| | Seminar Girls | 20.3 | All Other Girls | 16.1 | .73 |
| | High Scoring Non-Seminar Girls | 8.0 | All Other Girls | 16.1 | 2.56 |
| Choosing High Scoring Non-Seminar Girls | Seminar Girls | 20.3 | High Scoring Non-Seminar Girls | 37.5 | 2.73 |
| | Seminar Girls | 20.3 | All Other Girls | 30.0 | 1.75 |
| | High Scoring Non-Seminar Girls | 37.5 | All Other Girls | 30.0 | 1.70 |
| Choosing All Other Girls | Seminar Girls | 59.3 | High Scoring Non-Seminar Girls | 54.4 | .65 |
| | Seminar Girls | 59.3 | All Other Girls | 53.7 | .74 |
| | High Scoring Non-Seminar Girls | 54.4 | All Other Girls | 53.7 | .20 |

# APPENDIX N

## MOST POPULAR GIRL IN HIGH SCHOOL (GIRLS' OPINIONS)
## CHI SQUARE TEST

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | SEMINAR STUDENTS | HIGH SCORING NON-SEMINAR | OTHER | TOTAL |
| Seminar | 12<br>(8.8) | 12<br>(18.2) | 35<br>(32.1) | 59 |
| High Scoring Non-Seminar | 11<br>(20.2) | 51<br>(41.8) | 74<br>(74.0) | 136 |
| All Other | 71<br>(65.1) | 132<br>(135.0) | 236<br>(238.9) | 439 |
| Total | 94 | 195 | 345 | 634 |

$X^2$=10.38
d.f=4
sign level=.05

# APPENDIX O

## HOW HIGH SCHOOL GIRLS WOULD MOST LIKE TO BE REMEMBERED SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| CHOICES | POPULATION AND PER CENTS | | | | t |
|---|---|---|---|---|---|
| Most Popular | Seminar Girls | 34.8 | High Scoring Non-Seminar Girls | 28.6 | .86 |
| | Seminar Girls | 34.8 | All Other Girls | 27.1 | 1.31 |
| | High Scoring Non-Seminar Girls | 28.6 | All Other Girls | 27.1 | .33 |
| Leader in Extra-Curricular Activities | Seminar Girls | 19.6 | High Scoring Non-Seminar Girls | 22.6 | .49 |
| | Seminar Girls | 19.6 | All Other Girls | 30.7 | 2.12 |
| | High Scoring Non-Seminar Girls | 22.7 | All Other Girls | 30.7 | 2.05 |
| Brilliant Student | Seminar Girls | 45.4 | High Scoring Non-Seminar Girls | 48.5 | .40 |
| | Seminar Girls | 45.4 | All Other Girls | 42.1 | .47 |
| | High Scoring Non-Seminar Girls | 48.5 | All Other Girls | 42.1 | 1.33 |

## APPENDIX P

### HOW HIGH SCHOOL GIRLS WOULD MOST LIKE TO BE REMEMBERED
### (FIRST CHOICES)
### CHI SQUARE TEST

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | MOST POPULAR | LEADER IN EXTRA CURRICULAR ACTIVITIES | BRILLIANT STUDENT | TOTAL |
| Seminar Students | 1A<br>23<br>(18.4) | 1B<br>13<br>(19.0) | 1C<br>30<br>(28.6) | 66 |
| High Scoring Non-Seminar Students | 2A<br>39<br>(38.0) | 2B<br>31<br>(39.1) | 2C<br>66<br>(59.0) | 136 |
| Other Students | 3A<br>196<br>(201.6) | 3B<br>222<br>(207.9) | 3C<br>305<br>(313.4) | 723 |
| Totals | 258 | 266 | 401 | 925 |

$X^2=7.04$
d.f=4
sign level .10

# APPENDIX Q

## HOW HIGH SCHOOL BOYS WOULD MOST LIKE TO BE REMEMBERED: SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| CHOICE | POPULATION AND PER CENTS | | | | t |
|---|---|---|---|---|---|
| Most Popular | Seminar Boys | 27.6 | High Scoring Non-Seminar Boys | 28.6 | .14 |
| | Seminar Boys | 27.6 | All Other Boys | 30.4 | .68 |
| | High Scoring Non-Seminar Boys | 28.6 | All Other Boys | 30.4 | .74 |
| Athletic Star | Seminar Boys | 10.6 | High Scoring Non-Seminar Boys | 25.0 | 2.59 |
| | Seminar Boys | 10.6 | All Other Boys | 29.6 | 3.88 |
| | High Scoring Non-Seminar Boys | 25.0 | All Other Boys | 29.6 | 1.51 |
| Brilliant Student | Seminar Boys | 61.7 | High Scoring Non-Seminar Boys | 46.3 | 2.05 |
| | Seminar Boys | 61.7 | All Other Boys | 30.9 | 7.33 |
| | High Scoring Non-Seminar Boys | 46.3 | All Other Boys | 30.9 | 1.62 |

# APPENDIX R

## HOW HIGH SCHOOL BOYS WOULD MOST LIKE TO BE REMEMBERED
## (FIRST CHOICE)
## CHI SQUARE TEST

| POPULATION | CHOICES | | | TOTAL |
|---|---|---|---|---|
| | MOST POPULAR | ATHLETIC STAR | BRILLIANT STUDENT | |
| Seminar Students | 13<br>(14.0) | 5<br>(12.9) | 29<br>(20.1) | 47 |
| High Scoring Non-Seminar Students | 71<br>(73.9) | 62<br>(68.1) | 115<br>(106.0) | 248 |
| All Other Boys | 197<br>(193.1) | 192<br>(178.0) | 259<br>(276.9) | 648 |
| Total | 281 | 259 | 403 | 943 |

$X^2$=12.61
d.f=4
sign level <.02

## APPENDIX S

### BEST STUDENT IN SCHOOL: SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| CHOICES | POPULATION AND PER CENTS | | | | t |
|---|---|---|---|---|---|
| Seminar Students | Seminar Students | 75 | High Scoring Non-Seminar Students | 58.2 | 3.40 |
| | Seminar Students | 75 | All Other Students | 51.5 | 4.89 |
| High Scoring Non-Seminar Students | Seminar Students | 20 | High Scoring Non-Seminar Students | 34.1 | 2.98 |
| | Seminar Students | 20 | All Other Students | 36.9 | 2.86 |
| All Other Students | Seminar Students | 5.0 | High Scoring Non-Seminar Students | 7.5 | 1.11 |
| | Seminar Students | 5.0 | All Other Students | 11.4 | 2.40 |
| Mutual Group | High Scoring Non-Seminar Students | 58.2 | Seminar Students | 20.0 | 8.08 |

# APPENDIX T

## BEST STUDENT IN SCHOOL
## CHI SQUARE STATISTIC

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | SEMINAR STUDENTS | HIGH SCORING NON-SEMINAR STUDENTS | OTHER STUDENTS | TOTAL |
| Seminar Students | 75<br>55.5 | 20<br>34.8 | 5<br>9.8 | 100 |
| High Scoring Non-Seminar Students | 230<br>219.1 | 135<br>137.3 | 30<br>38.6 | 395 |
| All Other Students | 399<br>429.4 | 286<br>269.0 | 89<br>75.6 | 774 |
| Total | 704 | 441 | 124 | 1269 |

$X^2$=23.59
d.f=4
sign level .01

## APPENDIX U

### BEST ATHLETE IN SCHOOL
### SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| CHOICE | POPULATION AND PER CENTS | | | | t |
|---|---|---|---|---|---|
| Seminar Students | Seminar Students | 22.0 | High Scoring Non-Seminar Students | 17.7 | .87 |
| | Seminar Students | 22.0 | All Other Students | 14.4 | 1.82 |
| | High Scoring Non-Seminar Students | 17.7 | All Other Students | 14.4 | 1.63 |
| High Scoring Non-Seminar Students | Seminar Students | 32.0 | High Scoring Non-Seminar Students | 37.8 | 1.13 |
| | Seminar Studnets | 32.0 | All Other Students | 31.0 | .20 |
| | High Scoring Non-Seminar Students | 37.8 | All Other Students | 31.0 | 2.24 |
| All Other Students | Seminar Students | 46.0 | High Scoring Non-Seminar Students | 44.3 | .41 |
| | Seminar Students | 46.0 | All Other Students | 54.5 | 1.48 |
| | High Scoring Non-Seminar Students | 44.3 | All Other Students | 54.5 | 3.07 |

# APPENDIX V

## BEST ATHLETE IN SCHOOL
## CHI SQUARE STATISTIC

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | SEMINAR STUDENT | HIGH SCORING NON-SEMINAR STUDENT | OTHER STUDENTS | TOTAL |
| **Seminar Students** | 22<br>(16.1) | 32<br>(33.2) | 46<br>(50.6) | 100 |
| High Scoring Non-Seminar Students | 63<br>(57.1) | 134<br>(117.7) | 157<br>(179.2) | 354 |
| All Other Students | 99<br>(110.7) | 213<br>(228.1) | 374<br>(374.2) | 686 |
| Total | 184 | 379 | 577 | 1140 |

$X^2=13.99$
d.f=4
sign level $<$ .01

## APPENDIX W

### BOY MOST POPULAR WITH THE GIRLS
### SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| CHOICE | POPULATION AND PER CENTS | | | | t |
|---|---|---|---|---|---|
| Seminar Students | Seminar Students | 16.8 | High Scoring Non-Seminar Students | 12.0 | 1.14 |
| | Seminar Students | 16.8 | All Other Students | 11.6 | 1.19 |
| | High Scoring Non-Seminar Students | 12.0 | All Other Students | 11.6 | .19 |
| High Scoring Non-Seminar Students | Seminar Students | 38.2 | High Scoring Non-Seminar Students | 40.7 | .53 |
| | Seminar Students | 38.2 | All Other Students | 28.3 | 1.85 |
| | High Scoring Non-Seminar Students | 40.7 | All Other Students | 28.3 | 4.06 |
| All Other Students | Seminar Students | 44.9 | High Scoring Non-Seminar Students | 47.1 | .34 |
| | Seminar Students | 44.9 | All Other Students | 60.0 | 3.94 |
| | High Scoring Non-Seminar Students | 47.1 | All Other Students | 60.0 | 2.63 |

# APPENDIX X

## BOY MOST POPULAR WITH THE GIRLS
## CHI SQUARE STATISTIC

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | SEMINAR STUDENTS | HIGH SCORING NON-SEMINAR STUDENTS | OTHER STUDENTS | TOTAL |
| Seminar Students | 15<br>(10.9) | 34<br>(29.6) | 40<br>(48.6) | 89 |
| High Scoring Non-Seminar Students | 43<br>(43.4) | 145<br>(118.2) | 168<br>(194.3) | 365 |
| All Other Students | 75<br>(78.7) | 183<br>(214.2) | 387<br>(352.1) | 645 |
| Total | 133 | 362 | 595 | 1090 |

$X^2=21.52$
d.f=4
sign level $<.01$

# APPENDIX Y

## PARENTS' ATTITUDES TOWARD SCHOOL WORK
## SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| POPULATION AND PER CENTS | | | | t |
|---|---|---|---|---|
| Seminar Students | 90.2 | High Scoring Non-Seminar Students | 91.8 | .64 |
| Seminar Students | 90.2 | Other Students | 93.2 | .81 |
| High Scoring Non-Seminar Students | 91.8 | Other Students | 93.2 | .63 |

## APPENDIX Z

## PARENTS' ATTITUDES TOWARD COLLEGE ATTENDANCE SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| POPULATION AND PER CENTS | | | | | t |
|---|---|---|---|---|---|
| Seminar Students | 100 | | High Scoring Non-Seminar Students | 95.3 | 5.00 |
| Seminar Students | 100 | | Other Students | 88.9 | 10.49 |
| High Scoring Non-Seminar Students | 95.3 | | Other Students | 88.9 | 4.29 |

# APPENDIX AA

## ATTITUDES TOWARD BEING A SCIENCE ASSISTANT SIGNIFICANT DIFFERENCE BETWEEN TWO PER CENTS

| CHOICE | POPULATIONS AND PER CENTS | | | | t |
|---|---|---|---|---|---|
| | Seminar Boys | 61.7 | High Scoring Non-Seminar Boys | 53.7 | 1.04 |
| **Proud** | Seminar Boys | 61.7 | Other Boys | 49.7 | 1.59 |
| | High Scoring Non-Seminar Boys | 53.7 | Other Boys | 49.7 | .99 |
| | Seminar Girls | 56.0 | High Scoring Non-Seminar Girls | 62.9 | .97 |
| **Proud** | Seminar Girls | 56.0 | Other Girls | 54.5 | .31 |
| | High Scoring Non-Seminar Girls | 62.9 | Other Girls | 54.5 | 2.05 |
| | Seminar Students (Boys and Girls) | 58.4 | High Scoring Non-Seminar Students | 57.2 | .19 |
| Proud | Seminar Students (Boys and Girls) | 58.4 | Other Students | 52.5 | 1.20 |
| | High Scoring Non-Seminar Students | 57.2 | Other Students | 52.5 | 1.70 |

## APPENDIX BB

## ATTITUDES TOWARD BEING A SCIENCE ASSISTANT (BOYS)

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | PROUD | WOULDN'T CARE FOR | MIXED FEELINGS | TOTAL |
| Seminar Boys | 29<br>(24.5) | 2<br>(5.9) | 16<br>(16.6) | 47 |
| High Scoring Non-Seminar Boys | 144<br>(139.8) | 28<br>(33.4) | 96<br>(94.7) | 268 |
| All Other Boys | 174<br>(182.6) | 53<br>(43.7) | 123<br>(123.7) | 350 |
| Total | 347 | 83 | 235 | 665 |

$X^2=6.83$
d.f=4
sign level .10

# APPENDIX CC

## ATTITUDES TOWARD BEING A SCIENCE ASSISTANT (GIRLS)
## CHI SQUARE TEST

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | PROUD | WOULDN'T CARE FOR | MIXED FEELINGS | TOTAL |
| Seminar Girls | 37<br>(37.3) | 1<br>(5.3) | 28<br>(16.1) | 66 |
| High Scoring Non-Seminar Girls | 102<br>(91.6) | 8<br>(13.0) | 52<br>(57.3) | 162 |
| All Other Girls | 275<br>(285.0) | 50<br>(40.6) | 179<br>(178.3) | 504 |
| Total | 414 | 59 | 259 | 732 |

$X^2$=18.41
d.f=4
sign level .01

## APPENDIX DD

## OTHER PUPIL ATTITUDES TOWARD A SCIENCE ASSISTANT (BOYS)
## CHI SQUARE TEST

| | CHOICES | | | | |
|---|---|---|---|---|---|
| POPULATION | ENVY LOOK UP | KID BUT ENVY | LOOK DOWN | IMMATERIAL | TOTAL |
| Seminar Boys | 5<br>(1.7) | 27<br>(25.2) | 1<br>(1.8) | 13<br>(17.3) | 46 |
| High Scoring Non-Seminar Boys | 12<br>(9.8) | 155<br>(144.9) | 12<br>(10.6) | 86<br>(99.7) | 265 |
| All Other Boys | 7<br>(12.5) | 174<br>(185.9) | 13<br>(13.6) | 146<br>(128.0) | 340 |
| Total | 24 | 356 | 26 | 245 | 651 |

$X^2=16.95$
d.f=4
sign level .01

# APPENDIX EE

## OTHER PUPIL ATTITUDES TOWARD A SCIENCE ASSISTANT (GIRLS) CHI SQUARE TEST

| | CHOICES | | | | |
|---|---|---|---|---|---|
| POPULATION | ENVY LOOK UP | KID BUT ENVY | LOOK DOWN | IMMATERIAL | TOTAL |
| Seminar Girls | 2<br>(2.8) | 45<br>(36.0) | 1<br>(3.2) | 18<br>(24.0) | 66 |
| High Scoring Non-Seminar Girls | 5<br>(6.8) | 103<br>(87.8) | 6<br>(7.7) | 47<br>(58.1) | 161 |
| All Other Girls | 24<br>(21.3) | 249<br>(273.2) | 28<br>(24.1) | 200<br>(182.4) | 501 |
| Total | 31 | 397 | 35 | 265 | 728 |

$X^2$=16.09
d.f=4
sign level .01

## APPENDIX FF

## ATTITUDES TOWARD BEING AN INDUSTRIAL ARTS CLASS ASSISTANT
## CHI SQUARE TEST

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | AGREE | WOULDN'T AGREE | NOT SURE | TOTAL |
| Seminar Boys | 13<br>(14.3) | 10<br>(10.1) | 23<br>(21.6) | 46 |
| High Scoring Non-Seminar Boys | 80<br>(82.8) | 69<br>(58.7) | 118<br>(125.4) | 276 |
| All Other Boys | 113<br>(108.9) | 67<br>(77.2) | 171<br>(164.9) | 351 |
| Total | 206 | 146 | 312 | 664 |

$X^2=4.27$
d.f=4
sign level .10

# APPENDIX GG

## ATTITUDES TOWARD BEING A SEWING CLASS ASSISTANT
## CHI SQUARE TEST

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | AGREE | WOULDN'T AGREE | NOT SURE | TOTAL |
| Seminar Girls | 23<br>(22.1) | 13<br>(10.2) | 30<br>(33.6) | 66 |
| High Scoring Non-Seminar Girls | 58<br>(53.7) | 24<br>(24.8) | 78<br>(81.5) | 160 |
| All Other Girls | 163<br>(168.2) | 76<br>(77.9) | 263<br>(255.8) | 502 |
| Total | 244 | 113 | 371 | 728 |

$X^2=2.11$
d.f=4
sign level .10

## APPENDIX HH

## OTHER PUPILS ATTITUDES TOWARD A SEWING CLASS ASSISTANT
CHI SQUARE TEST

| | CHOICES | | | | |
|---|---|---|---|---|---|
| POPULATION | ENVY LOOK UP | KID BUT ENVY | LOOK DOWN | IMMATERIAL | TOTAL |
| Seminar Girls | 5<br>(6.2) | 29<br>(27.6) | 7<br>(5.6) | 25<br>(26.6) | 66 |
| High Scoring Non-Seminar Girls | 9<br>(14.7) | 77<br>(65.6) | 10<br>(13.4) | 61<br>(63.4) | 157 |
| All Other Girls | 53<br>(46.1) | 193<br>(205.9) | 44<br>(42.0) | 203<br>(199.0) | 493 |
| Total | 67 | 299 | 61 | 289 | 716 |

$X^2=7.91$
d.f=4
sign level .05

# APPENDIX II

## OTHER PUPIL ATTITUDES TOWARD AN INDUSTRIAL ARTS CLASS ASSISTANT CHI SQUARE TEST

| | CHOICES | | | | |
|---|---|---|---|---|---|
| POPULATION | ENVY LOOK UP | KID BUT ENVY | LOOK DOWN | IMMATERIAL | TOTAL |
| Seminar Boys | 4<br>(2.1) | 21<br>(19.1) | 5<br>(4.6) | 16<br>(20.2) | 46 |
| High Scoring Non-Seminar Boys | 13<br>(12.2) | 120<br>(110.9) | 23<br>(26.8) | 111<br>(117.0) | 267 |
| All Other Boys | 13<br>(15.7) | 132<br>(142.9) | 38<br>(34.6) | 161<br>(150.8) | 344 |
| Total | 30 | 273 | 66 | 288 | 657 |

$X^2$=6.77
d.f=4
sign level .10

## APPENDIX JJ

## IS YOUR SCHOOL WORK INTERESTING CHI SQUARE TEST

| POPULATION | RATING SCALE RESPONSES | | | | | TOTALS |
|---|---|---|---|---|---|---|
| | ALWAYS | USUALLY | SOMETIMES | SELDOM | NEVER | |
| Seminar Students | 1a<br>8<br>(4.0) | 1b<br>75<br>(66.2) | 1c<br>28<br>(36.7) | 1d<br>1<br>(3.9) | 1e<br>0<br>(1.2) | 112 |
| High Scoring Non-Seminar Students | 2a<br>22<br>(15.4) | 2b<br>264<br>(253.1) | 2c<br>124<br>(140.1) | 2d<br>16<br>(14.8) | 2e<br>2<br>(4.6) | 428 |
| All Other Students | 3a<br>20<br>(30.6) | 3b<br>483<br>(502.7) | 3c<br>303<br>(278.2) | 3d<br>31<br>(29.3) | 3e<br>13<br>(9.2) | 850 |
| Total | 50 | 822 | 455 | 48 | 15 | 1390 (T) |

$X^2=25.63$
d.f=4
sign level .01

# APPENDIX KK

Name ______________________________ High School ________________

Class in High School (check one): Junior ☐ Sex: Male ☐

Senior ☐ Female ☐

1. Do you know that certain students from your high school attend classes at Oneonta State University College of Education on Saturday mornings?

   Yes ☐ No ☐

2. If you know of these classes, about how long have you known about them?

   ______________________________________________

3. Have you ever been asked by your teachers, guidance counselors, or principal if you would like to attend these classes?

   Yes ☐ No ☐

4. If you were asked by one of these people, would you attend the Saturday morning classes?

   Yes ☐ No ☐ I don't know ☐

5. Give the reason for your answer in Question 4. In other words, answer "Why" to Question 4.

   ______________________________________________

   ______________________________________________

   ______________________________________________

   ______________________________________________

   ______________________________________________

   ______________________________________________

   ______________________________________________

   ______________________________________________

# APPENDIX LL

To: Guidance Counselors

From: Reuben Rusch

According to our records the following students from your high school are not in any seminar. However, on the STEP, in either mathematics, social studies, or science, they scored as high as or higher than the lowest score of a person currently in one of these three seminars. Would you please explain why you believe they are not in the seminars. Use this page and the space provided if convenient.

In addition, would you please have each of these students fill out one of the accompanying questionnaires. Please return them to me with your comments. We would like to have these returned by March 29, if possible.

John Doe

## APPENDIX MM

### THE CHI SQUARE TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESES THAT THE RESPONSES ARE INDEPENDENT OF GRADE IN HIGH SCHOOL

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | YES | NO | I DON'T KNOW | TOTAL |
| All Seniors | 71<br>(63.9) | 50<br>(54.6) | 88<br>(90.5) | 209 |
| All Juniors | 59<br>(66.0) | 61<br>(56.4) | 96<br>(93.5) | 216 |
| Total | 130 | 111 | 184 | 425 |

$X^2$=2.44

## APPENDIX NN

## THE CHI SQUARE TEST APPLIED TO THE HYPOTHESES THAT THE RESPONSES ARE INDEPENDENT OF SEX

| | CHOICES | | | |
|---|---|---|---|---|
| POPULATION | YES | NO | I DON'T KNOW | TOTAL |
| All Boys | 69<br>(82.0) | 80<br>(70.0) | 119<br>(116.0) | 268 |
| All Girls | 61<br>(48.0) | 31<br>(41.0) | 65<br>(68.0) | 157 |
| Total | 130 | 111 | 184 | 425 |

$X^2$=9.30

# APPENDIX OO

April 20, 1961

To: Guidance Counselors of the Participating Schools

From: Reuben Rusch

Re: Letter to College Registrars Concerning
Seminar Students' Academic Progress in College

Tuesday, April 18, I met with those of you who were present at the Guidance Group Meeting of the Catskill Area Project. At that time we discussed a method for gathering the information required to answer the second hypothesis: "What happens academically to the able and ambitious students when they go on to college?" The agreed upon procedure was as follows:

1. You would send me the name and address of the college that each of the graduates of the seminar from your high school now is or has attended. (A list of these previous seminar participants was sent to you last fall.) Along with this list you would send sufficient stationery from your high school for letters to each of these institutions of higher education.
2. Our office will type a letter (Type A) to the registrar of the college. We will send the letters to you for signing and mailing. We will have a duplicate made for your file.
3. When you receive the results from the registrar, you will send this information to our office.

Of course, this will probably not work as smoothly as we have planned. For example, in some cases the colleges have already sent this information to you. If the information is complete through the first semester of the academic year 1960-61, it will not be necessary to send this letter to the registrar. In these cases please forward the information on to our office as soon as possible. We will return the information to you in August.

In several cases some of you pointed out that it would be easier for you to dictate the several letters than to go through the trouble of mailing the list to us. In these cases would you please send us a copy of the letter to the registrar.

You will notice by the third page of this epistle that we are somewhat pessimistic concerning the rapidity of response of the registrars. If we have not heard from the registrars by May 15 or 20, it is our intent to send a follow-up letter (Type B). Here again the same procedure will be used as was used for letter Type A.

This procedure for gathering data could be greatly facilitated if a form letter was sent from the central office. However, the value judgment was made that the extra effort would be worthwhile, because the returns would be far better if the letters were signed by the guidance counselor and if the school letterhead was used.

This is the last extra effort that will be requested from you this year. I will be looking forward to receiving the names and addresses of the colleges that these past participants have or are now attending. Thank you for your continued cooperation.

# APPENDIX PP

## TYPE A

April 24, 1961

Registrar
Klipknockee State College
Slippery Rock, Vermont

Dear Registrar:

Harry Piel, who is a student currently attending your institution of higher education, once participated in the Saturday Seminars held at the State University College of Education, Oneonta, New York. These seminars are held for able and ambitious area high school juniors and seniors. The New York State Education Department is partially financing a follow-up study by the participating high schools of those seminar students who have gone on to college. We would appreciate receiving from you as soon as possible a record of all the college courses the above student has taken, the grades in these courses, and his major area.

This information concerning individual students will be kept confidential.

Sincerely,

Joe Blow

Guidance Counselor

# APPENDIX QQ

May 12, 1961

Registrar
Klipknockee State College
Slippery Rock, Vermont

Dear Registrar:

Several weeks ago I wrote you requesting certain information concerning Harry Piel, currently a student at Klipknockee State College. Harry Piel was one of several students from Who Dun It High School who participated in the Saturday Seminars at the State University College of Education, Oneonta, New York. This year the participating schools are doing a follow-up study of those seminar students who have gone on to college. We would appreciate receiving from you, as soon as possible, a record of all the college courses the above student has taken, the grades in these courses, and his major area.

This evaluation can only be successful to the extent that we receive complete information from college registrars. Your cooperation will be appreciated.

Sincerely,

Joe Blow

Guidance Counselor

# APPENDIX RR

July 31, 1961

To: Area School Representatives

From: Reuben R. Rusch

Re: College transcripts on students who have participated in the Able and Ambitious Saturday Seminars.

Attached are the transcripts of students from your high school who have participated in the Able and Ambitious Saturday Seminars and who have gone on to college. We hope that they will reach you in time for any use you might wish to make of them this fall.

As you know State aid for this experimental program has been approved for 1961-62. The exact hypotheses to be tested, from those suggested, have not been decided on. Therefore, there is the remote possibility that you will be asked to return these transcripts for further analysis during the next school year.

Shortly, as your school's representative, you will receive your schools copy of the report of this years findings. This report is intended to give you a picture of the findings and to satisfy the requirements of the Experimental Programs Division of the State Education Department. The information contained in this report should not be released to the public at this time.

A new administrator of this experimental program is to be appointed next year. I will continue to serve only as the research consultant. Thank you very much for your close cooperation this year.

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